

Appendix F



Delburn Wind Farm

Landscape and Visual Impact Assessment

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Delburn Wind Farm Pty Ltd (An OSMI Australia company)



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Appendix A. Seen Area Analysis**Appendix B. Photomontages**

1. Introduction

Delburn Wind Farm Pty Ltd (an OSMI Australia Company) is seeking approval to develop a new wind energy facility in southeast Victoria.

The proposed Delburn Wind Farm (the Project) will include:

- Up to 33 wind turbines, with an overall height of 250 m;
- Internal access tracks;
- Wind monitoring masts;
- Operations and maintenance facilities; and
- Underground cabling and necessary infrastructure to connect the Project to the grid.

The Project, inclusive of the grid connecting infrastructure, is proposed within the existing HVP Plantations Thorpdale Tree Farm.

The original turbine layout proposed up to 53 wind turbines with an overall height of 250 m, internal access tracks, wind monitoring stations, underground cabling and an on-site terminal station. This layout has been refined to remove 20 turbines in response to a range of initial concerns which include views and visual amenity.

1.1 Purpose of this report

The purpose of this report is to assess the landscape and visual impacts that may be brought about by the Project. This report is to be submitted as part of the Permit Application.

2. Methodology

The methodology used within this LVIA of the proposed Delburn Wind Farm includes the following steps and tasks.

2.1 Project Description

This chapter outlines the visual components of the Delburn Wind Farm that have the potential to contribute to views and visual impact. These components will include the proposed wind turbines, access roads, permanent buildings and construction activity. The major visual component of this Project, however, will be the wind turbines and will be the main focus of this LVIA.

2.2 Viewshed

Defining the viewshed of the Project is based upon the key elevation or overall change in height that might be brought about by the key components of the Project. The viewshed is considered as the distance at which the visual changes brought about by the Project may no longer contribute to views in a meaningful way based on parameters of the human vision. The rationale behind the definition of the viewshed is discussed in Section 4 of this report.

This viewshed extent will be used to define the study area for this LVIA report.

2.2.1 Zones of Visual Influence

Zones of Visual Influence (ZVI) quantify the scale of the potential effects of a Project over varying distances. This step is a useful measure to contemplate the potential for visual dominance of the project in views.

2.3 Planning Policy Framework

This chapter will identify the relevant policies and provisions that apply to areas within the viewshed of the Project that are relevant to views, landscape sensitivity and visual impact.

This will assist in understanding the sensitivities of different landscapes within the viewshed.

2.4 Landscape Character

This chapter will review the landscape character of the viewshed to identify landscape units.

2.4.1 Landscape Units and Sensitivity

Landscape Units are based on the physical characteristics, land-use and planning provisions of the area within the Viewshed. Features that assist in defining the landscape units and a sensitivity rating include geology, vegetation, topography and drainage patterns, urban development and modification of the landscape. The use of the land and the underlying protections of an area that are afforded by the provisions within the planning scheme assist to determine the sensitivity of that area to visual change. This step recognises that the planning scheme identifies landscapes that are significant, rare or threatened and provides guidance on how these features may be preserved.

The sensitivity of a landscape unit considers the ability for a landscape to accommodate the level of change that is proposed by a project. Generally, the greater the extent of modifications in an area, or the prevalence of the landscape type and its use, the lower the sensitivity that landscape will be to visual change.

These landscape units will assist in understanding a particular landscape's sensitivity to visual change.

2.5 Seen Area Analysis

A Seen Area Analysis (SAA) utilizes Geographical Information Software (GIS) to map the areas of theoretical visibility of the Project, as a whole or in part, utilising topographical data alone. The SAA is a conservative

analysis tool as it does not take into account other factors that may affect visibility, such as intervening vegetation, built form or atmospheric conditions such as fog, low cloud or haze.

The SAA assists in selecting viewpoints which have theoretical visibility of the proposed turbines, to be assessed within the report.

2.6 Publicly Accessible Viewpoints

This chapter will assess the visual impact of the Project from indicative viewpoints within the public domain. This assessment will be supported by photomontage imagery to assist with describing the location, scale and visibility of the Project.

The visual impact of a wind farm development from the public domain is based upon four criteria which are supported by the preceding steps and assessment tasks. These criteria and their influence in determining the assessment of the overall visual impact from the public domain are set out below:

- **Visibility:** The visibility of the Project elements can be affected by topography, vegetation, built form and infrastructure.
- **Distance:** Turbine visibility and dominance will decrease with distance. The Zones of Visual Influence (ZVI) provides an indication of visual dominance and potential impact based on distance. This criterion is one of several to be considered when assessing the overall visual impact of the Project from any location.
- **Landscape Character and Sensitivity:** Landscape character of areas is based upon visual features such as topography, vegetation and the use of the land, the naturalness of the area and planning provisions. Sensitivity may also be influenced by specific landscape studies and assessments within the project viewshed. Typically, a modified landscape that is prevalent within the viewshed or the region is less sensitive than one that is ostensibly natural or protected for its environmental, ecological or cultural values.
- **Viewer numbers:** The overall level of visual impact, which considers these four criteria, will decrease where there are fewer people able to view the Project. Conversely, the level of visual impact may also increase where the viewing location is a recognised vantage point or tourist route where viewer numbers from these locations would be rated as 'high'.



A summary table is provided at the end of each of the viewpoint assessments to outline the key quantitative elements that form part of the views and visual impacts. The overall visual impact considers both qualitative and quantitative criteria which is discussed at each viewpoint. The sum of the quantitative considerations alone does not form the basis of the overall visual impact.

The overall visual effect will range from Nil to High. The definition for each scale is discussed below.

2.6.1 Scale of Effects

The overall visual impact of the Project from an indicative publicly accessible viewpoint has been assessed using the following scale:

Nil Visual Impact

Nil – There are no visible turbines and the Project will be screened by topography, vegetation or buildings and structures. Where no turbines are visible there will be no visual impact.

Negligible Visual Impact

Negligible – minute level of effect that is barely discernible over ordinary day-to-day effects. The assessment of a 'negligible' level of visual impact is usually based on distance. That is, the wind farm is at such a distance that, when visible in good weather, it would be a minute element in the view within a modified landscape. If there is limited visibility of turbines such as tip of blades only due to intervening topography, vegetation or buildings and structures the visual impact would also be considered negligible.

Low Visual Impact

Low – visual impacts are those where the Project is noticeable but that will not cause significant adverse impacts. The assessment of a "low" level of visual impact will be arrived at if the rating of several of the four criteria, (visibility, distance, viewer numbers and landscape sensitivity), are assessed as low.

Medium/Moderate Visual Impact

Medium/Moderate – visual impact may occur when several of the four assessment criteria are considered as higher than "low" or the visual effects can be mitigated/remedied from an initial rating of High. This will be moderated by the context of the existing view and the modifications within the landscape

High Visual Impact

High or unacceptable adverse effect – extensive adverse effects that cannot be avoided, remedied or mitigated. The assessment of a "high or unacceptable adverse effect" from a publicly accessible viewpoint requires the assessment of all criteria to be high. For example, a highly sensitive landscape, viewed by many people, near the proposed wind farm where turbines are visible would lead to an assessment of an unacceptable adverse effect.

Positive Visual Impact

Positive Visual Impact – is a visual change that improves the outlook or view. For renewable energy projects, a positive visual impact may be experienced where the individual viewer appreciates the view of wind turbines in the landscape or the link to renewable energy. This positive reaction is supported by the findings in numerous community perceptions surveys undertaken within Australia and globally.

2.7 Residential Viewpoints

An assessment of individual residential dwellings within 6.0km of the nearest turbine will be undertaken by this Landscape and Visual Impact Assessment.

The assessment of visual impact from residences is different from that undertaken from publicly accessible viewpoints in that visitor numbers is not applicable and landscape sensitivity is also always rated as 'high'. It is recognised that people feel most strongly about the view from their house and areas of attached outdoor living spaces.

Many of the residential site visits have been assisted by the application of proprietary augmented reality software undertaken by the client.

2.8 Photomontages and Project Imagery

Project imagery relied upon within this report includes traditional photomontages, prepared by Jacobs, virtual reality imagery prepared by Ignition Immersive Studios and Augmented Reality (AR) imagery developed through TrueView[®]. True View is proprietary software developed specifically for wind farm projects in the United Kingdom. Combined, this imagery assists to demonstrate the 250 m high wind turbines in a range of landscape settings, viewing angles and distances and the effectiveness of vegetation and landscape screening in screening or filtering views towards the Project.

Virtual reality and TrueView[®] imagery have been tested for technical and perceptual accuracy. Virtual reality imagery was compared by capturing high resolution still images from virtual reality scenes which were overlaid over Jacobs photomontages to discern key reference points such as turbine placement, tower scale and the

prominence of existing landscape features. This imagery is closely aligned both technically and perceptually to the methodology developed for traditional photomontages that were utilised in the Preliminary Landscape and Visual Impact Assessment and that has been applied and tested for many projects, including wind farms across Australia.

Testing of the TrueView[®] imagery was undertaken using the same techniques for virtual reality and in the field. In field testing comprised modelling the features of the existing Bald Hills Wind Farm and existing features at the project site such as the meteorological mast and topography. This imagery proved to be technically accurate where the relative scale of turbines and existing features were aligned in TrueView. However, testing determined that distant features in both the Bald Hills Wind Farm trials and at the Project site appeared to be smaller or less visually apparent in the TrueView[®] views than when observed on site. Similar to the reduced apparent scale of existing features in background elements, this would also result in the scale of turbines in the background of views being similarly understated. This is not dissimilar to comparing imagery taken using wide-angle which will understate objects in the background or zoom lenses which will overstate these same objects. For the reasons of perceptual accuracy, the AR imagery has been used to guide conversations regarding the technical placement and scale of the proposed turbines in views. The photomontages, which provide for a range of distances should be relied upon as set out in the methodology below to consider the perceptual scale of turbines.

The following section describes the methodology for the preparation of the still photomontages used within the Preliminary Landscape and Visual Impact Assessment and also included in this assessment. This sets out the technical accuracy aspects of the imagery and how to achieve perceptual accuracy. The methodology for preparing the Virtual Reality imagery which has formed the basis of the photomontages of the final project layout is described below.

2.8.1 Lens size and photos used within the photomontages

Photomontages are prepared to show the change in a fixed view of 60° horizontal and either 10° or 15° in the vertical field of view. The 60° horizontal field of view represents the central cone of view in which symbol recognition and colour discrimination can occur. By using a standard field of view (60° horizontal and 10° or 15° vertical) the photomontages can also assist to portray the scale of the proposed wind turbines when viewed over various distances. The 60° horizontal field of view is important to demonstrate the context and scale of the Project in views.

The vertical field of view assists to represent the central field of view of human vision as shown in Figure 2-1.

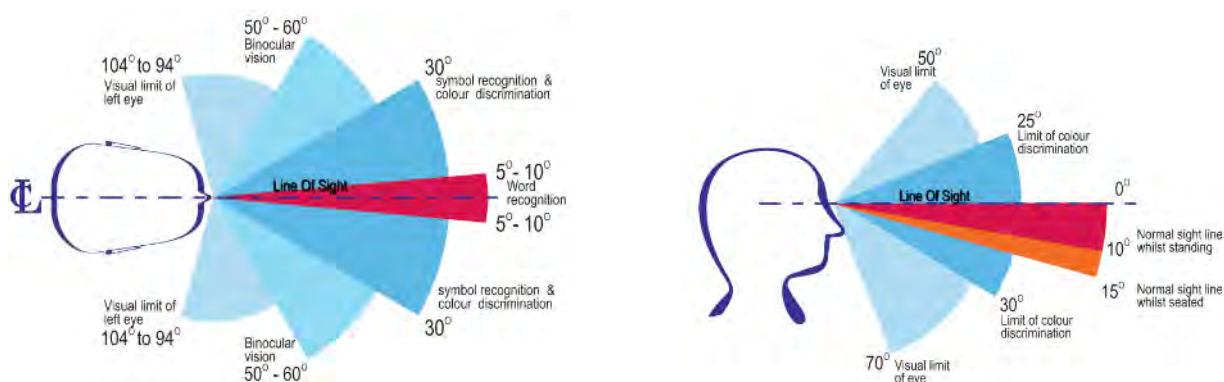


Figure 2-1: Horizontal and Vertical field of view (Human Dimension and Interior Space, Julius Panero & Martin Zelnik, Witney Library of Design, 1979)

Similar data can be found in the more recent publication entitled 'The Measure of Man and Woman, Current Edition', Henry Dreyfuss Associates, John Wiley & Sons, 2012.

The A3 photomontages, which are appended to this report in Appendix B, provide a better size in which to view the images in the context of the report and the assessment.

For verification purposes, each photomontage included in the appendices includes:

- The existing view and proposed photomontage
- a 60° horizontal field of view of the existing view and photomontage: and
- a wireframe view of the computer model accompanied by a numbered turbine layout.

The latter technically illustrates how the photomontages are prepared. In these views vertical 'poles' or cylinders located features such as trees, towers or buildings and a 'mesh' models the existing topography into the view. These features allow the computer model (prepared in 3D Studio Max) and the photograph to be accurately aligned before preparing the final renderings.

This ensures that the proposed wind farm is accurately located within the photograph and then the rest of the model is removed, and the wind farm is rendered into the image. This is explained further in Section 2.8.3 below.

2.8.2 Computer Modelling and the wireframe model

Contour data as well as the proposed development are modelled within a computer program (3d Studio Max). A virtual camera is set up in the model at the GPS coordinates for each of the photographs that are being used within the panorama.

The digital model or wireframe view is then overlaid on the photographic panorama. Known points within survey information such as topography, building locations or other infrastructure are registered into the base photographs (or other predetermined points). For technical accuracy, these points must align. This verifies the location and apparent height and scale of the proposed development.

After the background reference points have been aligned, the wireframe is removed, leaving only the proposed wind farm facilities, which are rendered, either to match the lighting conditions at the time the photographs were taken or, more typically, to maximise their visibility by increasing their contrast against the background sky.

Photomontages are prepared with a 60° field of view, which follows the parameters of human vision. Wider panoramas are also used to indicate the full extent of the proposed wind farm facilities where appropriate.

2.8.3 GPS Coordinates and distance to the wind farm

The Nikon D850 camera also records the GPS coordinates as part of the metadata. GPS coordinates are also taken based on a separate hand-held GPS and the locations from which the photographs were taken is also marked on a digital map at the location of each photograph.

2.8.4 Imagery Locations

Photomontages have been prepared from nine locations to assist with informing the project design using an earlier iteration of the wind turbine layout v2.1, being 35 wind turbines. These photomontages were used to inform the environmental referrals and the Preliminary LVIA. For those viewpoints where photomontages were prepared the visual changes between the depicted layout and that being sought for approval do not result in a visual change and would not alter the assessments of the turbines in either a visual or a landscape context. Therefore, these photomontages are still relevant for informing this LVIA. The photomontages assist to show the range of viewing locations, viewing angles and distances towards the project. The photomontages have been included in the assessment of views at viewpoints H1, H5, L7, M6, L10, L14, L21, L22, M3 and T6.

The use of photomontages has been supplemented with Virtual Reality scenes from six locations surrounding the project, using a layout (v3.0) largely consistent with that being sought for approval (6 wind turbines have been subsequently micro sited less than 100m). The Virtual Reality imagery was presented at the community consultation days scheduled over March 13 and 14 whereby members of the surrounding and nearby communities were able to engage with the Project in a realistic setting that included the motion of the turbines, vehicles and 360° sound environment. Similar to the selection of locations from which to prepare photomontages, the Virtual Reality scenes were selected to better understand the range of views and landscape

settings in views towards the Project. The locations from each of the six scenes have been assessed at viewpoints H5, M15, L12, L16, L21 and T6.

Two wireframe views have also been prepared using the 'Concept Layout' (v1.5, being 53 wind turbines) only. These are shown at viewpoints L15 and T9. The reason for the wireframe views is that the proposed wind turbines would be largely screened by topography, vegetation or both. For this reason, the images have been included within the assessment as they demonstrate the potential visibility from clusters of residential dwellings or localities.

These photomontages are appended to this report (Refer Appendix B for A3 size photomontages with a 60° field of view).

It is recognised that the small photographs and the A3 photomontages included in this assessment are not indicative of the actual visual impact. The A3 images, which are appended to this report (Appendix B), are clearer than the smaller images in the text.

However, to view the photomontages in a way that they appear perceptually accurate, they need to be printed and viewed on A0 sized sheets and held at arms' length. When viewed at A0 the photomontages are representative of the level of visual alteration.

2.8.5 Virtual Reality

Virtual Reality imagery animates the turbines in the view, provides soundscapes from the location and captures the movement of vegetation, vehicles and elements typical of each location. These images provide useful and grounding context that cannot be captured or presented in still images and photomontages.

Virtual reality scenes were prepared from six locations around the project and in locations where turbines would be wholly visible or in part. The virtual reality scenes were made available at the community consultation and drop-in days undertaken in March 2020. The six locations were selected to provide for a range of viewing distances, view angles and landscape settings to assist the community to engage with the Project and understand how it would sit in the landscape should the Project be approved. The six selected locations included:

- Darlimurla Road
- McDonalds Track
- Morwell Thorpdale Road
- Strzelecki Highway
- Ten Mile Creek Road; and
- Yinnar Township.

A link to this imagery is provided on the Project's website. Where relevant, stills from the virtual reality scenes have been included at the corresponding viewpoint in the assessment of views and visual impact in Section 8 of this report.

2.8.6 Augmented Reality

The imagery prepared using the True View® Visuals applies propriety software loaded within an iPad Pro. Imagery is captured on-site using the inbuilt camera with the iPad mounted and levelled on a tripod. Where possible, the existing view is aligned with an iPad based upon the embedded terrain model, existing features and project design. This initial imagery allows high-level views to be discussed in the field.

Following the capture of on-site imagery, the scenes are further refined to allow for fine-tuning and validation imagery including terrain matching through horizontal and vertical alignment, correction to the iPad's internal compass headings using fixed points in the landscape and subsequent rendering of the turbines into the image.

2.9 Landscape Mitigation

It is recognised that wind turbines are unavoidably visible and often contrast with the environments in which they are situated. The assessment and approvals process are required to consider the acceptability of impacts on landscape values, the amenity of communities and residential dwellings and the ability of mitigation to manage these impacts.

Mitigation options available to manage the visual impact from locations that are significantly visually affected by a wind farm include:

- vegetation screening to filter or screen the proposed wind turbines from dwellings or areas of private open space;
- re-siting of turbines to locations where they will have less visual impact (or removal if necessary).

This LVIA will consider the ability for landscape screening to be effective at filtering or screening views towards the Project.

3. Project Description

This section will describe and locate the Project relative to nearby towns and features and identify key elements of the Project relevant to preparing an LVIA.

3.1 Wind Farm Location

The Project site is located approximately 126 km east of Melbourne and 8.5 km south of Moe.

The Project will be located entirely within HVP's Thorpdale Tree Farm. Figure 3-1 shows the proposed site boundary in relation to nearby towns and major roads.

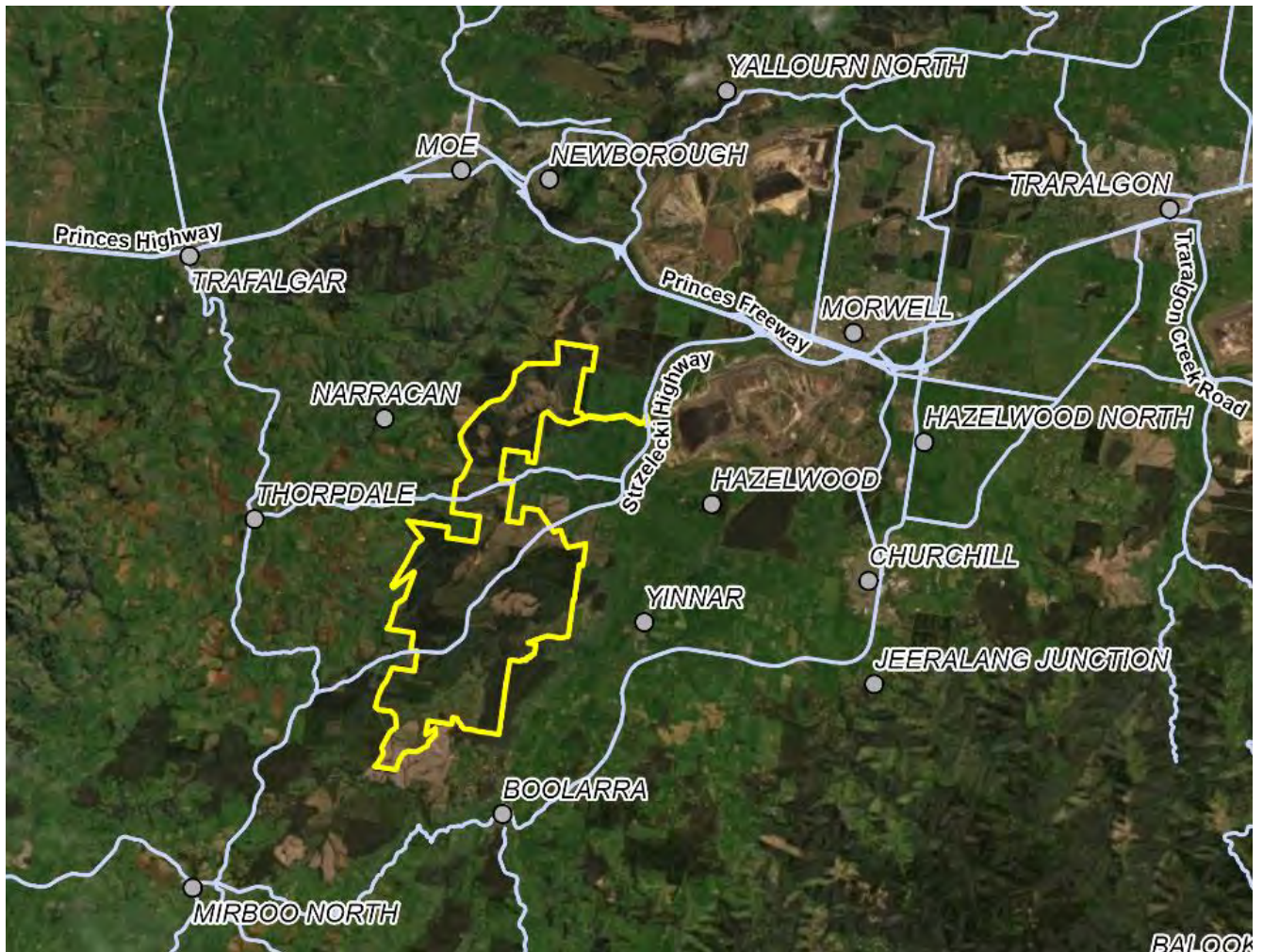


Figure 3-1: Site Location Map

Nearby towns and rural communities include Trafalgar, Narracan, and Coalville to the north-west, Thorpdale to the west, Delburn central to the Project, Hazelwood and Morwell to the northeast, Yinnar and Churchill to the east, Boolarra, and Mirboo North to the south of the Project.

Major roads include the Princes Freeway to the north of the Project and the Strzelecki Highway which passes through the existing pine plantations and the Project site. There are many sealed and gravel roads connecting farms, towns and rural communities.

The Grand Ridge Rail Trail is located to the south of the Project. The trail is approximately 13 km long and runs between Boolarra at its eastern end and Mirboo North to the west. The trail follows the line of the former Mirboo North railway line.

There are several open cut coal mines and operating coal-fired power stations located generally to the north, northeast and east of the Project area. Power stations are connected to the State electricity grid via a network of high voltage transmission lines which bisect the landscape. There are also several mining leases ranging from expiring, operational and exploratory to the northeast and east of the project.

A 500kV and a 220kV transmission line bisect the northern part of the Project site and near to the area of the proposed on-site substation.

The Project is seeking approval for a layout comprising 33 wind turbines. This layout has been revised from initial layouts which comprised up to 53 wind turbines at the inception of the Project. This report will focus on the application layout comprising 33 turbines which is referred to as Version 3.5.

This turbine layout will form the basis of this LVIA report.

3.3 Wind Turbines

There are three key components of a wind turbine that are useful to assess the visual impact of a proposed wind farm. These are the overall turbine height, which forms the basis of the extent of the viewshed and the visual study area, rotor diameter, which supports the preparation of the Seen Area Analysis or GIS studies and the nacelle or hub height which is a static or constant element in views.

The final turbine specifications for the blade length and the nacelle height will be determined following approval of the Project and when a preferred turbine supplier has been selected. If approved, a fixed element will be the overall turbine height of 250 m. This overall height may comprise shorter blade lengths and a taller mast, or conversely longer turbine blades and a shorter mast.

Several recent Victorian Wind farms have sought to alter their approved blade length and mast height configurations. Visual studies comprising comparative photomontages prepared in support of the varying turbine configurations have determined that there is little perceptible difference between the turbine configurations. This assessment will adopt the following dimensions as the basis for the quantitative assessment tasks and mapping for establishing the Project viewshed or study area. The Zones of Visual Influence which assist to consider visual prominence over distance and the Seen Area Analysis which will identify patterns or locations of theoretical turbine visibility.



Turbine Feature	Specification for LVIA
Overall Height	250m above natural ground
Swept Path / Rotor Diameter	180m
Number of Turbines	33

It is recognised that the turbine height is not a fixed element and will vary depending on the blade position relative to its azimuth. To be conservative this assessment will be based on the overall height of 250 m above natural ground. This height will be used to determine the extent of viewshed, Zones of Visual Influence.

3.4 Aviation Obstacle Lighting

It is understood that aviation obstacle lighting is not required to be installed as recommended by the Aviation Impact Assessment.

This assessment has therefore not considered the potential for impacts from night lighting.

3.5 Grid Connection

Grid connecting infrastructure will require the construction transformers at the base of the turbines, underground 33 kV power lines and new substation and battery storage facility adjacent to an existing high voltage transmission line.

All new electrical infrastructure will be located within the existing timber plantations and the proposed site boundary.

3.5.1 Terminal Station

A new terminal station would be located at the northern end of the Project area adjacent to an existing 220 kV lattice tower transmission line. The substation and battery storage area are proposed to be located within a cleared area at the western end of Deans Road approximately 2.0 km west of the Strzelecki Highway. Figure 3-3 shows the location of the proposed on-site substation in blue and battery storage facility.

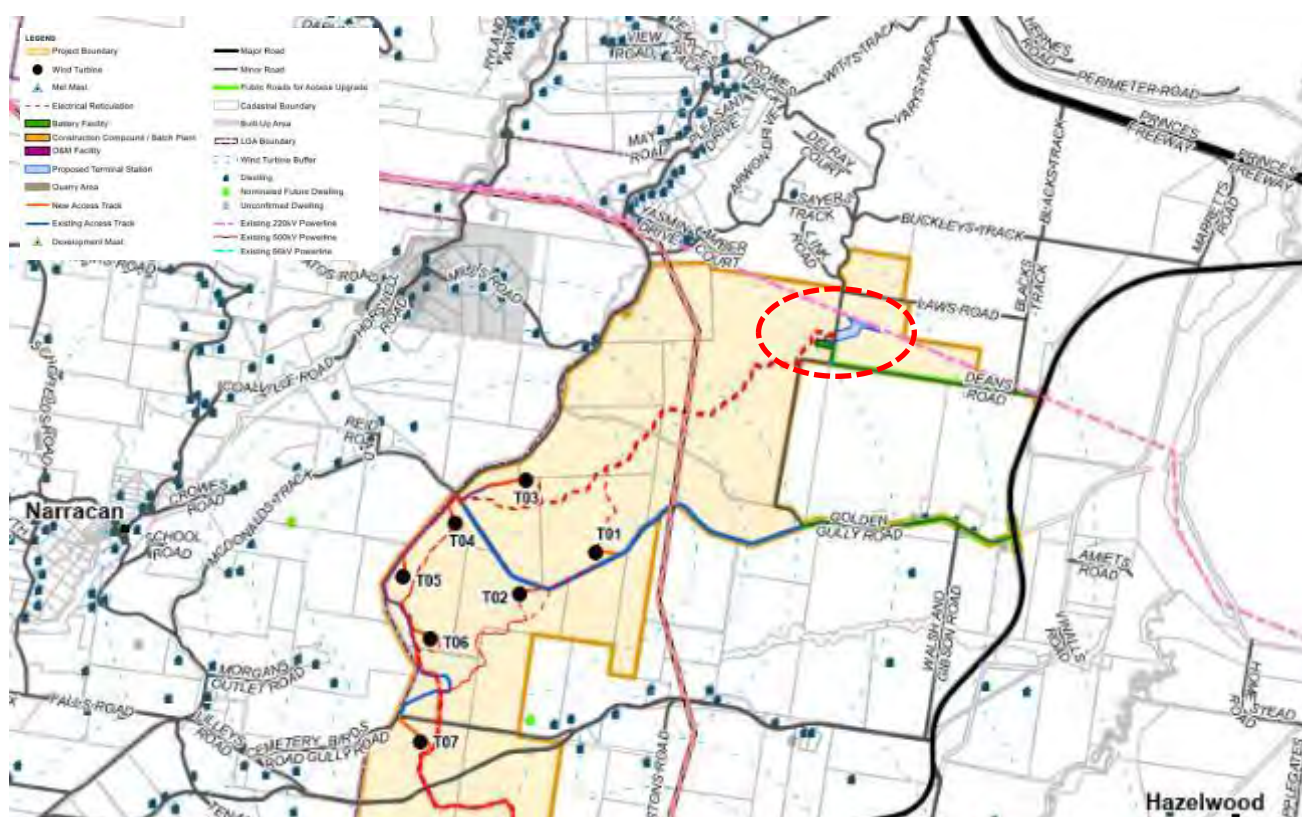


Figure 3-3: Substation and Battery Storage Investigation area (Source: OSMI)

Deans Road is a public road which is truncated near to the proposed terminal station and battery storage facility.

A separate approval is being sought for the terminal station and its' landscape and visual impacts will be assessed separately.

3.5.2 Battery Storage

The Project is investigating the viability and benefits that might be achieved through the inclusion of a battery storage facility as part of the Project. Should this be included, the battery storage area would be located near the terminal station.

The location of the proposed gully battery storage area will be considered in views assessed within this report.

Figure 3-4 shows an example of a typical battery storage facility for a wind farm project.



Figure 3-4: Typical battery storage

Although the above example is for a larger project, the dimensions of the individual power conversion units (PCU's) and battery storage facilities are similar in size and scale.

3.5.3 Powerlines

Electricity generated by the proposed wind turbines is required to be converted from Direct Current (DC) to alternating current (AC) via transformers located within each turbine.

The converted AC electricity will be transferred to the on-site terminal station via underground 33 kV power lines adjacent to internal access roads within the managed timber plantations.

3.6 Operations and Maintenance Facility

New operations and maintenance buildings will be required for use by permanent employees of the Project. These building will include offices and meeting spaces as well as storage of equipment, materials and vehicles and will be located on the corner of Smiths Rd and Strzelecki Highway within the managed timber plantation.

Visually, the operations and maintenance facilities will be similar to many other buildings and sheds found in the surrounding area.

3.7 Wind Monitoring Masts

Up to three wind monitoring stations are proposed across the Project site. Meteorological masts monitor wind characteristics across the life of the project. Typically, meteorological masts comprise steel lattice structures with tensioning wires for support and stability and are installed to the height of the nacelle. Newer technology includes mobile LIDAR units which are trailer mounted and can be moved across the site.

There are currently three wind monitoring stations installed as part of the early investigation of the Project. These include a 160 m high meteorological mast and two mobile LIDAR unit. Figure 3-5 shows the existing meteorological mast and mobile LIDAR unit in operation within the timber plantations.



Figure 3-5: Existing meteorological mast and LIDAR units

3.8 Access Tracks

The Project seeks to utilise existing operation and access tracks established within the managed plantation areas. This will limit impacts to the existing timber plantation operations, adjacent areas of native vegetation and minimise impacts on local traffic.

Some forestry tracks will be widened and upgraded to accommodate the articulation widths required to transport larger sections of turbine components and sections of new tracks between the existing forestry tracks and the final turbine locations.

There is limited visibility of the existing forestry tracks from locations beyond the site. This is due in part to existing vegetation and topography which screens views.

3.9 Construction

Construction activities include the excavation and pouring of the turbine foundations, transportation and assembly of the various turbine components, construction of the substation and grid connecting infrastructure, upgrading and construction of access tracks, modifications to intersections, and establishment of the operations and maintenance facilities.

The Project will also include the establishment of temporary on-site concrete batching plants for the construction of the foundations for the wind turbines which, amongst other things, assisting to reduce truck movements along local roads.

Figure 3-6 shows an example of a modular silo batching plant.



Figure 3-6: Portable batching plant

Following the completion of construction, all temporary works such as construction compounds and laydown areas would be removed and either rehabilitated or established as plantation areas. The batching plant area is proposed to be converted to a visitor area once construction is complete.

4. Viewshed

This section establishes a basis on which to determine the extent of the study area for visual impact, and the scale of the proposed 250 m high wind turbines when viewed at various distances.

The extent of the viewshed is the distance within which the proposed 250 m high wind turbines have the potential to be readily perceptible objects in views. This distance is established based upon the parameters of the human vision and the height of the proposed turbines. It may still be possible to see wind turbines from areas beyond the viewshed; however, they would be at a distance where they would not be conspicuous.

The parameters of human vision relevant to views and visual impact include the vertical and horizontal fields of view. These figures are based on data from '*Human Dimension and Interior Space*', Julius Panero & Martin Zellnik, Witney Library of Design, 1979. These figures are supported by similar data in '*The Measure of Man and Woman, Revised Edition*', Henry Dreyfuss Associates, John Wiley & Sons, 2012. This data forms the basis for determining the viewshed for the Project.

Figure 4-1 shows the horizontal field of view.

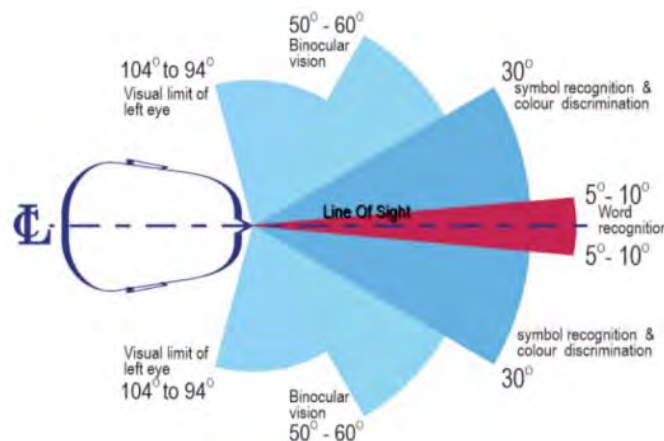


Figure 4-1 Horizontal field of view

The angle of the central field of vision is between 50° to 60°. This view angle is also relevant to the preparation and reproduction of perceptually accurate photomontages and printed reference imagery. By referencing a common benchmark, in this instance 60°, and utilising comparable camera specifications, scale of the proposed turbines over varying distances can be reliably considered.

Figure 4-2 shows similar parameters for the vertical field of view.

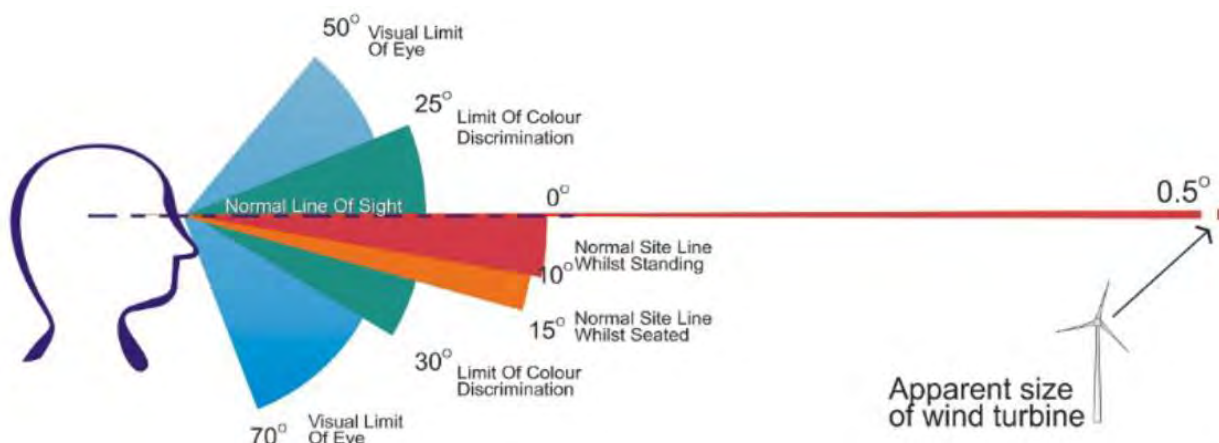


Figure 4-2: Vertical field of view

The "Normal" vertical field of view of a person is between 10° - 15°. The theoretical extent of the viewshed is considered to be a distance at which the tallest component of the Project would take up less than 5% or 0.5° of the "Normal" 10° of the vertical field of view.

With an overall height of 250 m, the proposed wind turbines are the largest element of the Project. The distance at which a 250 m high turbine would comprise 5% (0.5°) of the vertical field of view is 28.6 km.

Similar calculations for the horizontal field of view based on 50° - 60° central cone of view and the distance at which a swept path of 180 m will comprise 5% (0.5°) of the 50° horizontal field of view is 2.06 km. This calculation does not recognise the Project footprint, nor the vertical scale of the proposed wind turbines. The vertical field of view provides an alternative basis for calculating the extent of the viewshed.

The following section will describe the Zones of Visual Influence (ZVI) for the Turbines.

4.1 Zones of Visual Influence

Zones of Visual Influence (ZVI) assist to assess the visible scale of the proposed turbines over varying distances. The same principles used to determine the viewshed assist to define visual scale based on the distance to a turbine. For example, when a viewing location is closer to a turbine, the turbine would take up a greater percentage of the vertical field of view. This forms one element of several criteria that contribute to determining the overall visual impact of a project from viewing locations.

The ZVI, which will form part of the visual assessment of the Project is also calculated based upon the parameters of the human vision are set out in Table 4-1.

Table 4-1: Zones of Visual Influence

Distance to 250m high turbine	The vertical angle of view	Zones of Visual Influence
>28.60km	<0.5	Visually insignificant – Extent of the project viewshed The Project will be a very small element in views, is difficult to discern and will be invisible in some lighting or weather circumstances.
14.5-28.6km	0.5-1.0	Discernible, but will not be dominant in views The Project will be visible, however, will not be a dominant feature in views or the landscape.
6.0-14.5km	1.0-2.5	Potentially noticeable and can dominate the landscape Where visible, the Project has the potential to be noticeable in views.
3.0-6.0km	2.5-5.0	Highly visible and will usually dominate the landscape The Project has the potential to be a dominant visual element in views. The degree of visual intrusion will depend on the wind turbines' placement within the landscape and factors such as foreground screening.
<3.0km	>5.0	Will always be visually dominant in the landscape Dominates the landscape in which they are sited.

Figure 4-3 demonstrates the reducing scale of the Project relative to the Zones of Visual Influence are perceived in views across the landscape. That is, the further away a viewing location is from the Project, the smaller or lower the Project will appear in the vertical field of view.

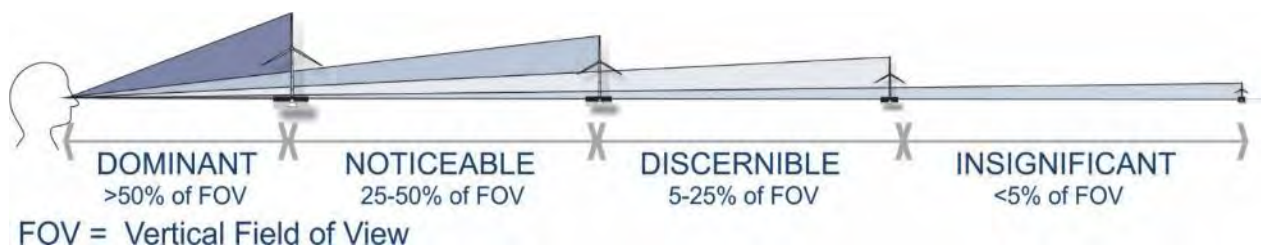


Figure 4-3: Zones of Visual Influence Diagram

The extent of the viewshed and the Zones of Visual Influence of the 33, 250 m high wind turbines proposed by the Delburn Wind Farm are shown in Figure 4-4.

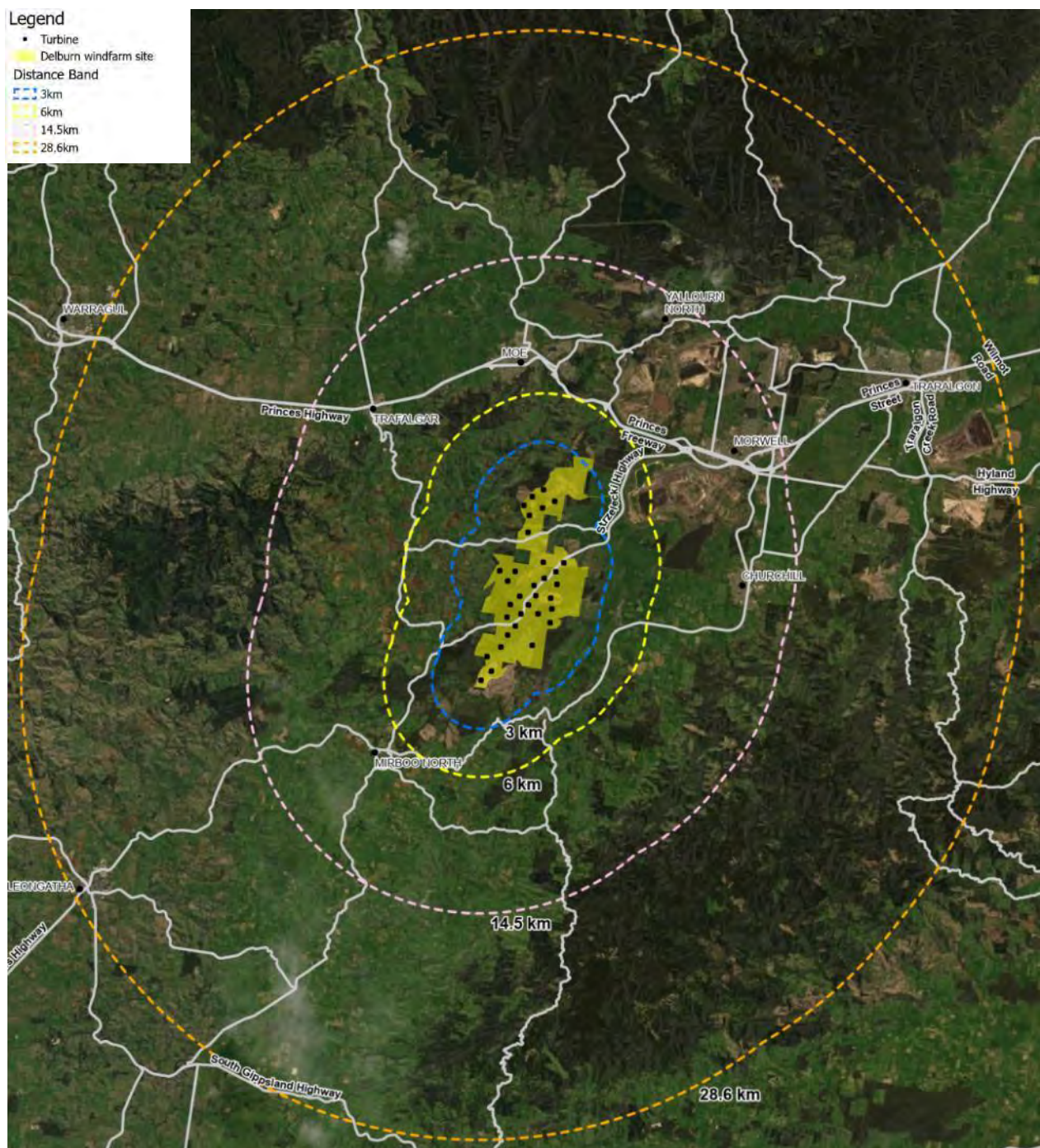


Figure 4-4: Zones of Visual Influence Map

ZVI's provide a guide to considering the visual scale of the proposed 250 m high wind turbines based on distance. The proposed wind turbines will be visually noticeable out to a distance of 28.6 km on clear days with good visibility. The proposed wind turbines have the potential to be highly visible and potentially dominant features in views from distances within 6.0 km. It is recognised that the apparent size of the Project will not change dramatically when a viewer moves from one distance band to another, for example from 5.9 km to 6.1 km.

With the viewshed established at 28.6 km, this following chapter will undertake a review of Planning Policies and Guidelines that are applicable to the assessment of landscape and visual impacts within the project viewshed.

5. Planning Policy

This chapter will review the relevant sections of the Planning Policy Framework, Planning and Policy Guidelines for Development of Wind Energy Facilities in Victoria (January 2016) and identify the local planning schemes and provisions relevant to this assessment.

This is not intended to be a thorough review of the planning scheme, mechanisms and triggers as this is best undertaken by others. Rather this review seeks to identify areas or locations that may be of a particular landscape or visual significance when compared to other landscapes in the region and recognised or protected accordingly.

5.1 Planning Policy Framework (PPF)

The PPF sets out broad policy objectives to ensure uniform and consistent application of the planning scheme. The following Clauses are of relevance to an LVIA of the Project.

5.1.1 Clause 12.05-2S Landscapes

The objective of this provision is to protect and enhance significant landscapes and open spaces that contribute to the character, identity and sustainable environments. Key strategies include:

- *Ensure significant landscape areas such as (native) forests, the bays and coastlines are protected;*
- *Ensure development does not detract from the natural qualities of significant landscape areas;*
- *Improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas;*
- *Recognise the natural landscape for its aesthetic value and as a fully functioning system; and*
- *Ensure important natural features are protected and enhanced.*

Local content to this clause is provided at Clause:

- *21.06 (Natural Environment) of the Baw Baw Planning Scheme;*
- *21.06 (Environmental and Landscape Values) of the South Gippsland Planning Scheme;*
- *21.03 (Environmental and Landscape Values) of the Latrobe Planning Scheme; and*
- *21.13 (Environment and Landscape Values) of the Wellington Planning Scheme.*

5.1.2 Clause 19.01-2S Renewable energy

Clause 19.01-2s seeks to promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met. Key and relevant strategies include:

- *Facilitate renewable energy development in appropriate locations;*
- *Set aside suitable land for future energy infrastructure;*
- *Consider the economic and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment; and*
- *Recognise that economically viable wind energy facilities are dependent on locations with consistently strong winds over the year.*

5.2 Local Planning Policy Framework

The Project site is located within areas covered by the Baw Baw, La Trobe and South Gippsland Planning Schemes. While the Project viewshed also covers land located within the Wellington Planning Scheme. The majority of the Project boundary and viewshed is located within the Latrobe Shire.

Figure 5-1 shows the Project boundary and the 28.6 km viewshed in proximity to shire boundaries.

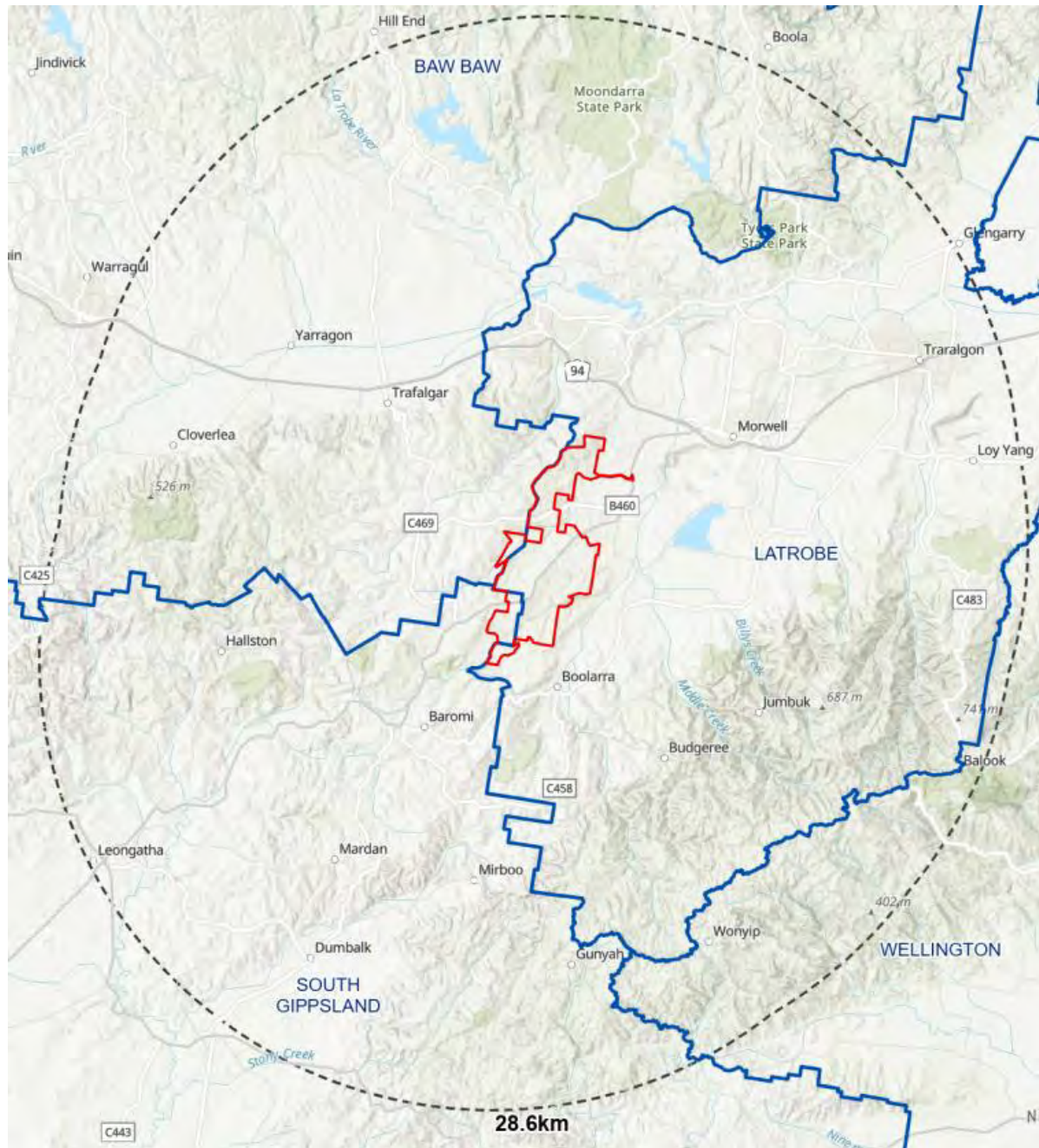


Figure 5-1: Project Boundary and viewshed relative to LGAs

The following clauses of the LPPF's described within the Baw Baw, South Gippsland, Latrobe and Wellington Planning Schemes are of relevance to this LVIA of the Project.

5.2.1 Baw Baw Planning Scheme – Clause 21.06 Natural Environment and Resource Management

Clause 21.06 describes the role that rural areas and significant water catchments play in the provision of the State's water and natural resources and the value placed on the pastoral, rural and bushland landscapes by residents and visitors. Key objectives of this clause relate primarily to the protection of:

- *Clause 21.06-3 Biodiversity*
- *Clause 21.06-4 Natural Resource Base*
- *Clause 21.06-5 Water Catchments*

- *Clause 21.06-6 Farmland and Soil Quality*
- *Clause 21.06-7 Forestry Operations*
- *Clause 21.06-8 Coal Resources*
- *Clause 21.06-9 Stone Resources*

5.2.2 South Gippsland Planning Scheme - Clause 21.06 Environmental and landscape values

Clause 21.06 describes specific coastal landscapes within the Shire that are of State or regional significance which include Venus Bay Peninsula and Anderson Inlet, Cape Liptrap and Waratah Bay, and Corner Inlet Amphitheatre. These areas are included within a Significant Landscape Overlay which seeks to protect landscape values specific to these areas. These features are over 30 km from the project and outside the viewshed.

5.2.3 South Gippsland Planning Scheme - Clause 21.13 Infrastructure

Clause 21.13 Infrastructure recognises that *'the use of alternative, renewable energy sources such as solar and wind power is a small, yet significant, method by which the community can address the global issue of climate change through local actions. However, there needs to be a balance between the potential benefits and negative impacts of using alternative energy technologies.'*

Relevant objectives and strategies include:

- *Objective 1 – To encourage the use of alternative energy sources in the provision of electricity.*
- *Strategy 1.1 – Promote the use of alternative energy sources, such as wind, tidal and solar power.*
- *Objective 2 – To ensure that the use of alternative energy technology does not detrimentally affect the surrounding environment. Specifically, strategy 2.2 discourages tall structures on ridgelines or in view corridors.*
- *Strategy 2.1 – Ensure the design and siting of structures associated with alternative energy production does not detrimentally affect the character of the area.*
- *Strategy 2.2 – Discourage tall structures on ridgelines or in view corridors*
- *Strategy 2.3 – Minimise the potential impact of alternative energy sources on the existing physical and ecological relationships of flora and fauna, and identify appropriate mitigation techniques where required*
- *Strategy 2.4 – Minimise the potential impact of alternative energy sources on public health and safety, including fire hazard*

When deciding on an application for alternative energy sources the following matters will be considered as appropriate:

- *The design and siting of any structure associated with the energy installation; and*
- *The visual impact on the landscape, including visual corridors and sight lines.*

5.2.4 Latrobe Planning Scheme - Clause 21.03 Environmental and Landscape Values

This provision provides local content to support Clause 12 (Environmental and Landscape values) of the State Planning Policy Framework. A relevant objective is:

- *Objective 3 – To protect and enhance the visual, natural and cultural heritage values of rural landscapes.*

5.2.5 Wellington Planning Scheme – Clause 21.13 Environment and Landscape Values

The overview of the Wellington Environment and Landscape Values states that *"The Shire's rural areas contain some of the most ecologically important and diverse areas in the State. These have high intrinsic natural values and are a significant factor in attracting people to reside and visit the Shire. There are significant environmental landscape issues facing the Shire's rural areas, including inappropriate residential development and the*

protection of vegetation habitat. Infrastructure development can have significant detrimental effects on the landscape. The rural amenity of the Shire is an asset which warrants protection. Residents and tourists derive pleasure from the scenic values of the rural landscapes. Even the highly modified areas of the Shire possess high landscape values. The Macalister Irrigation District, with its picturesque, green irrigated dairy country set against the foothills of the Great Dividing Range is an excellent example of the region's aesthetic assets."

- *Objective 1 - To protect, improve and sustainably manage the Shire's natural environment and diverse landscapes.*
- *Objective 2 - To recognise the visual, landscape and recreational importance of the Gippsland Lakes and coastal environment to the region.*

5.3 Zones and Overlays

Planning zones describe permissible uses, identify areas of sensitivity and protection of features that are special or unique to an area. Zones and overlays also protect the continued use of areas and businesses against adverse amenity claims such as dust, noise, odour or views.

Uses such as coal mines and reserves, power stations, plantations or farming areas have the potential for offsite amenity impacts such as odour, noise, dust or visual. Planning provisions for these areas put in place protections to enable the continued use of those areas and protect them from encroachment and incompatible uses.

Similarly, landscapes that exhibit special or unique features are typically found within Significant Landscape Overlays (SLOs) or Environmental Significance Overlays (ESO). These overlays include guidance on how these areas might be protected. Sensitive uses, such as residential areas or National Parks are often protected against adverse impacts that may be detrimental to the use and enjoyment of these areas from incompatible uses.

5.3.1 Zones within the viewshed

The majority of the land within the viewshed of the Delburn Wind Farm is Farming Zone (FZ) and Special Use Zone 1 – Brown Coal Reserves (SUZ1). The Public Use Zone 1 (PUZ1) covers services and utilities in the Shire of Baw Baw, north of the Project site. Figure 5-2 shows the land-use zones within the viewshed of the Delburn Wind Farm.

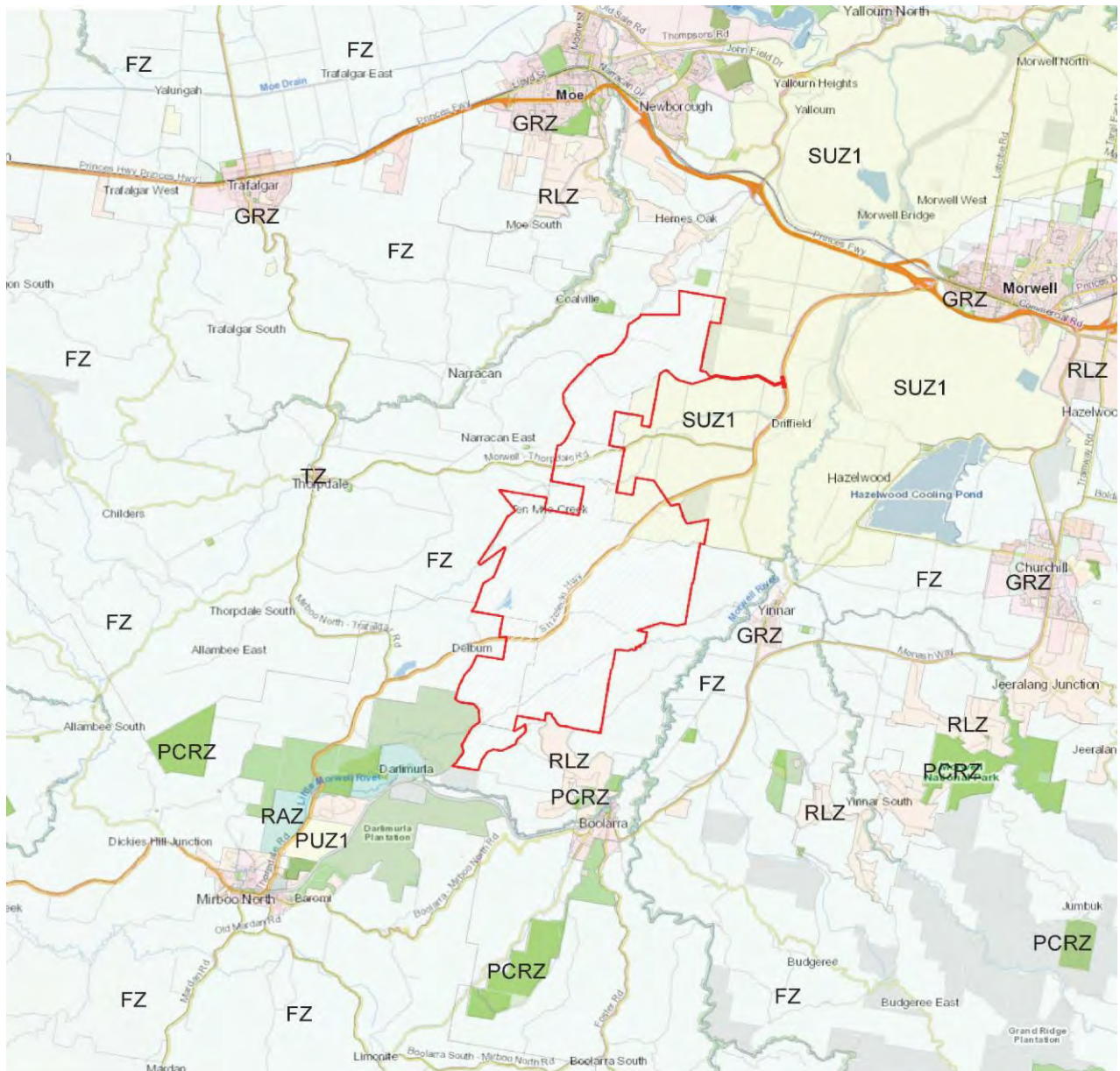


Figure 5-2: Zones within and surrounding the site. (Source: <https://mapshare.vic.gov.au/vicplan/>)

Sensitive uses include the areas within land zoned Public Conservation and Resource Zone (PCRZ), General Residential Zone (GRZ), areas within the Rural Living Zone (RLZ) and open space areas located within the Public Park and Recreation Zone (PPRZ).

Places of interest and sensitive uses within these zones include the Bull Beef Creek Nature Conservation Reserve, Moondarra State Park and Tyers Park and residential clusters within townships and rural living.

With the exception of the Rural Living Zones near Boolarra and Moe, the majority of the areas zoned for residential purposes are setback from the site's immediate boundaries.

Further, the rural living zones to the northeast of the site near Morwell as well as those near Churchill, Jerralang Junction and Yinnar South are at distances greater than 6kms. Beyond 6kms the turbines have the potential to be a noticeable element where they are clear views.

5.3.2 Zone and overlays affecting the site

The majority of the Project is within land designated Farming Zone (FZ). A small portion of the northern part of the site is within land zoned Special Use Zone – Brown Coal (SUZ1). The portion of the site within the Baw Baw Planning Scheme is included within a broader Erosion Management Overlay (EMO). An Environmental Significance Overlay – Schedule 5 (ESO) within the South Gippsland Shire Planning Scheme also covers part of the site's southern boundary. This ESO relates to the management of erosion and water quality.

Farming Zone (FZ)

The purpose of the Farming Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework;*
- *To provide for the use of land for agriculture;*
- *To encourage the retention of productive agricultural land;*
- *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture;*
- *To encourage the retention of employment and population to support rural communities;*
- *To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision; and*
- *To provide for the use and development of land for the specific purposes identified in a schedule to this zone.*

The Farming Zone contemplates that uses within these areas have the potential to impact on the amenity of sensitive uses such as residential dwellings. Areas within Farming Zones are not sensitive from a landscape and visual perspective.

Special Use Zone (SUZ1)

The purpose of the Special Use Zone is *to recognise or provide for the use and development of land for specific purposes as identified in the schedule to this zone.*

The purpose of SUZ1 – Brown Coal is:

- *To provide for brown coal mining and associated uses;*
- *To provide for electricity generation and associated uses; and*
- *To provide for interim and non-urban uses which protect brown coal resources and to discourage the use or development of land incompatible with future brown coal mining and industry.*

Areas within the Special Use Zone contemplate or have approved uses that are intensive and not sensitive to visual change. Further, many of these areas have either current coal mining leases or exploratory licenses in place.

Figure 5-3 shows the proximity of mining and exploratory leases within land zoned SUZ in proximity to the project. Current mineral exploratory licenses area shown with an EL prefix. Current or approved mining licenses are shown with an MIN prefix. The approximate project boundary has been included on the image below.

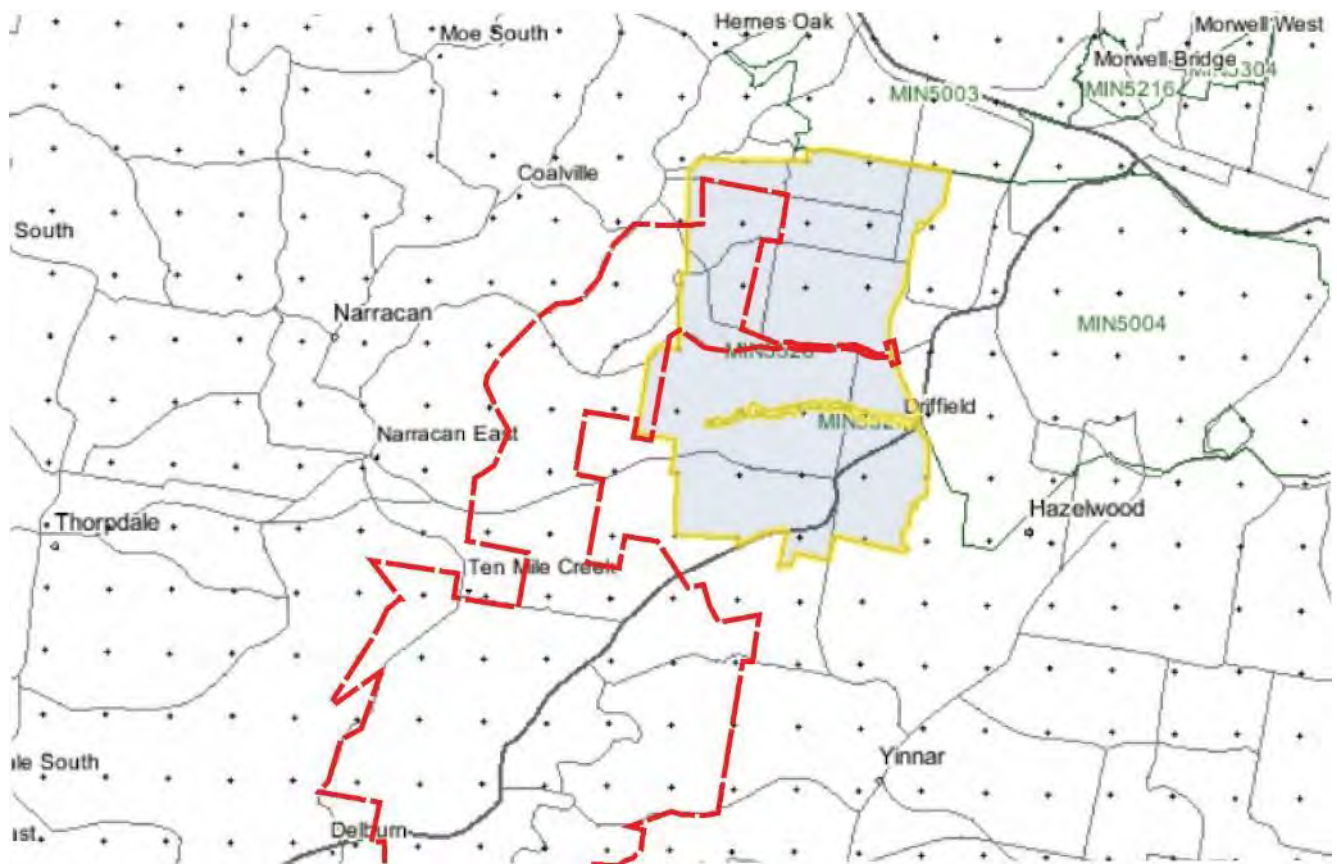


Figure 5-3 Current Coal Mining Licence (MIN5526)

Mining licence MIN5526 is located to the west of the Strzelecki Highway and the locality of Driffield and to the east of the Project.

It is recognised that such licenses do not grant permission to construct or operate a coal mine in the affected areas, however, they do allow for further studies and potential approvals of such activities.

5.3.3 Overlays within the viewshed

Overlays recognise landscape features that are special or unique, that are distinct to the areas that surround them. Significant Landscape Overlays (SLO) are implemented to identify, conserve and enhance the character of significant landscapes. There are two such overlays within the Project viewshed. Figure 5-4 shows the SLOs in proximity to the Project site.

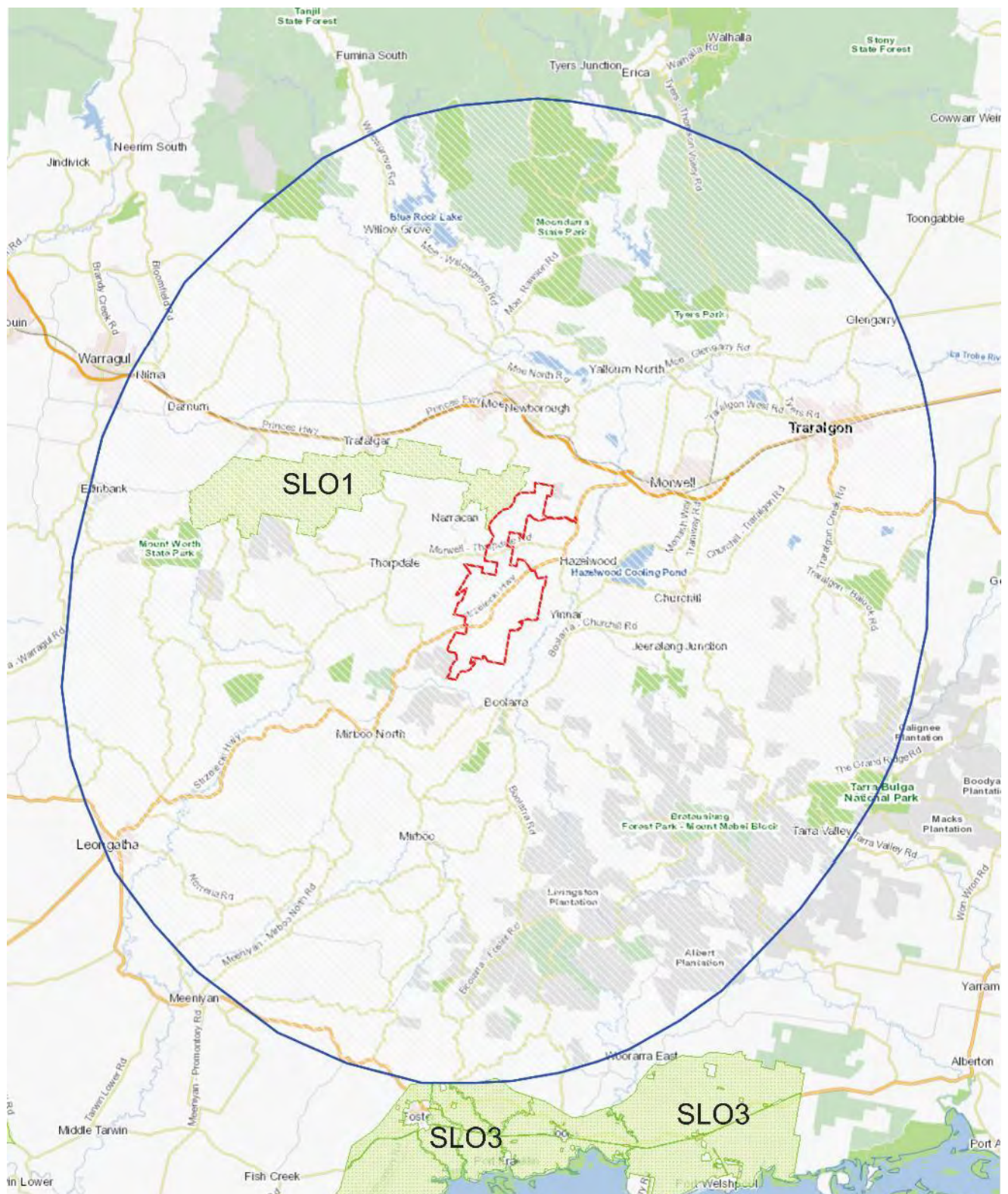


Figure 5-4: SLOs within the viewshed. (Source: <https://mapshare.vic.gov.au/vicplan/>)

Schedule 3 to the SLO of the South Gippsland Planning Scheme sits just inside the 28.6km viewshed. SLO3 relates specifically to a landform known as the Corner Inlet Amphitheatre. The Project will not be discernible, or visible from locations which will affect the interpretation of SLO3.

Schedule 1 to the SLO of the Baw Baw Planning Scheme applies to the northern foothills of the Strzelecki Ranges. The Statement of significance states that:

The north face of the Strzelecki Ranges presents a landscape of diversity where cleared land, remnant vegetation and timber plantations co-exist. No dominant built development exists and yet houses, and narrow roads climb from the valley floor and foothills adjoining the Princes Highway between Yarragon and Trafalgar.

The Landscape Character objective to be achieved within SLO1 is:

- *To protect the natural beauty and landscape form of the Strzelecki Range.*
- *To protect the rural landscape from insensitively designed development.*
- *To maintain and protect the diversity of landscapes, native fauna, remnant vegetation and sites of historical, botanical and zoological significance.*
- *To provide for the development of tourism-oriented activities which complement the landscape of the Strzelecki Ranges.*
- *To recognise and protect the landscape and conservation features of the Strzelecki Ranges.*
- *To protect the Ranges and the surrounding landscapes from visual intrusion and inappropriate development.*

SLO1 is located to the south of the Princes Highway between the shire boundary near the Project site to Hazeldean Road to the west and applies to a broad area approximately 15 km in length and up to 4 km deep behind Yarragon South. Figure 5-5 shows part of the landscape within SLO which is located in the area behind the township of Trafalgar to the west of the site.

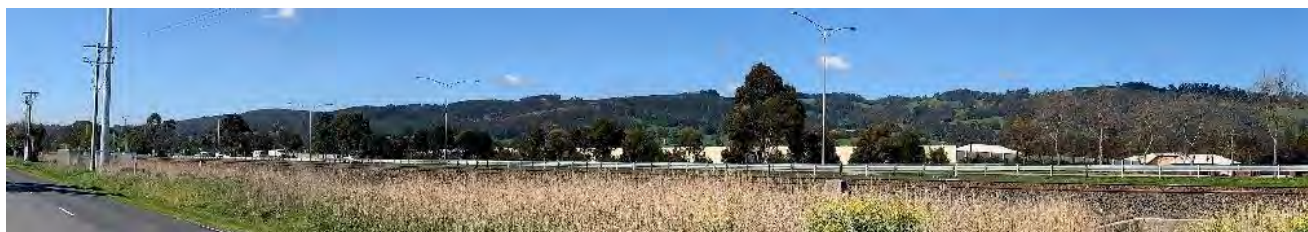


Figure 5-5: View of SLO1 from the edge of Trafalgar

SLO 1 seeks to, amongst other things protect the landscape form of the Strzelecki Range and the rural landscape from insensitively designed development and to protect them and the surrounding landscapes from visual intrusion and inappropriate development.

The proposed wind farm will not alter the landform of the Strzelecki Range. This assessment will consider views from publicly assessable locations that may include the area within the SLO.

The change in views and the interpretation of the SLO will be considered as part of this Landscape and Visual Impact Assessment.

Environmental Significant Overlay (ESO)

There are several ESOs within the viewshed, however there were no particular landscape-visual values or objectives identified in a high-level review of the purpose and objectives of each schedule.

ESO1 (Areas of Natural Significance) of the South Gippsland Planning Scheme, although outside the project viewshed identifies areas of natural and landscape significance as follows:

- *To conserve areas of high environmental and landscape quality, ensuring development minimises adverse environmental impact; and*
- *To protect the views of identified significant vistas*

There are several policies and strategies within the Latrobe Planning Scheme that seek to protect and preserve large areas for future exploitation of the vast brown coal resources. There are no overlays in these areas that seek to protect these areas for their scenic qualities and amenity to the broader region.

5.4 Particular Provisions – Clause 52.32 (Wind Energy Facility)

Clause 52.32 (Wind Energy Facility) applies to land used and developed or proposed to be used and developed for a Wind energy facility to establish and expand wind energy facilities, in locations that are appropriate or that will have minimal impact on the amenity of the area.

Section 4 requires an application to provide a site and context analysis including specific information relevant to landscape and visual impact.

- *Direction and distances to nearby dwellings, townships, urban areas, significant conservation and recreation areas, water features, tourist routes and walking tracks, major roads, airports, aerodromes and existing and proposed wind energy facilities*
- *Views to and from the site, including views from existing dwellings and key vantage points including major roads, walking tracks tourist routes and regional population growth corridors;*
- *National Parks, State Parks, Coastal Reserves and other land subject to the National Parks Act 1975;*

The application should include an assessment of:

- *The visual impact of the proposal on the surrounding landscape;*
- *The visual impact on abutting land that is described in a schedule to the National Parks Act 1975 and Ramsar wetlands and coastal areas.*

Decision Guidelines

Before deciding on an application, in addition to the decision guidelines of Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework;*
- *The effect of the proposal on the surrounding area in terms of noise, blade glint, shadow flicker and electromagnetic interference;*
- *The impact of the development on significant views, including visual corridors and sightlines;*
- *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (Department of Environment, Land, Water and Planning, March 2019).*

5.4.1 Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (March 2019)

Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (March 2019) (the Guidelines) is a reference document listed at Clause 52.32-6 - Decision guidelines. The guidelines provide operational performance standards to inform the assessment and operation of a wind energy facility.

The features of the landscape include:

- *the topography of the land*
- *the amount and type of vegetation*
- *natural features such as waterways, cliffs, escarpments, hills, gullies and valleys*
- *visual boundaries between major landscape types*
- *the type, pattern, built form, scale and character of development, including roads and walking tracks*
- *flora and fauna habitat*

- *cultural heritage sites*
- *the skyline.*

The degree of visual impact of a wind energy facility depends on the extent of the change to the landscape caused by the development, taking into account:

- *the visibility of the development*
- *the locations and distances from which the development can be viewed*
- *the significance of the landscape as described in the planning scheme (including in an overlay, a relevant strategic study or landscape features referenced in the planning scheme)*
- *landscape values associated with nearby parks described in a schedule to the National Parks Act 1975 or Ramsar wetlands*
- *landscape values associated with nearby land included in the schedule to Clause 52.32-2 of the planning scheme, such as specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres*
- *the sensitivity of the landscape features to change.*

The visual impact of the development relates to:

- *the number, height, scale, spacing, colour and surface reflectivity of the wind turbines*
- *the quantity and characteristics of lighting, including aviation obstacle lighting (subject to CASA requirements and advice)*
- *avoidance of visual clutter caused by turbine layout and ability to view through a cluster or array (visually well-ordered series) of turbines in an orderly manner*
- *the removal or planting of vegetation*
- *the location and scale of other buildings and works including transmission lines and associated access roads*
- *proximity to sensitive areas*
- *proximity to an existing or proposed wind energy facility, having regard to cumulative visual effects.*

Suggested impact reduction measures

- *siting and design to minimise impacts on views from areas used for recreation and from dwellings*
- *locating arrays of turbines to reflect dominant topographical and/or cultural features, such as ridgelines, the coastline, watercourses, windbreaks or transmission lines • using turbine colour to reduce visual impacts from key public viewpoints*
- *limiting night lighting to that required for safe operation of a wind energy facility and for aviation safety*
- *reducing the number of wind turbines with obstacle lights while not compromising aviation safety*
- *mitigating light glare from obstacle lighting through measures such as baffling*
- *selecting turbines that are consistent in height, appearance and rotate the same way*
- *spacing turbines to respond to landscape characteristics*
- *undergrounding electricity lines wherever practicable*
- *minimising earthworks and providing measures to protect drainage lines and waterways*
- *minimising removal of vegetation*
- *avoiding additional clutter on turbines, such as unrelated advertising and telecommunications apparatus.*

A key requirement of the guidelines is the consideration of the provisions within the local Planning Schemes and especially any provisions that relate to landscape significance or community values that apply to areas within the viewshed. These include views and visual impact from nearby dwellings, townships and urban areas, conservation and recreation areas, water features, tourist routes and walking tracks, major roads. Views from publicly accessible locations are assessed in Section 8 of this report. The consideration of views and impacts from nearby dwellings are set out in section 9.

5.5 Planning Implications

The PPF puts in place measures to protect natural features, scenic qualities and prominent views and vistas across the project viewshed. These desires are also echoed by Clause 52.32 which seeks to balance the recognition that wind turbines are large structures and to ensure that they are sited correctly paying particular attention to overlays including ESOs, and SLOs, all of which identify and protect particular environmental or qualitative features.

The majority of the project viewshed is occupied by areas within the Farming Zone (FZ) or Special Use Zone (SUZ) which is set aside specifically for the extraction of coal and energy production. The more sensitive uses in proximity to the project are the residential clusters to the west, south and south-east of the project.

South Gippsland Planning Scheme Clause 21.13 Infrastructure *Objective 2 seeks to ensure that the use of alternative energy technology does not detrimentally affect the surrounding environment. Specifically, strategy 2.2 discourages tall structures on ridgelines or in view corridors.*

There were originally 5 turbines located within this area in the Concept layout. 2 turbines have been removed in this area within the current layout (Version 3.5).

This clause is unique to the South Gippsland Planning Scheme and does not reside in any of the other planning schemes. Several viewpoints will be selected from where this clause applies and be assessed in Section 8.

The following section (Section 6) will determine the landscape character types and their sensitivity to change. Section 7 will then explore the visibility of the turbines from these areas within the viewshed to assist with selecting views from each of the identified character areas to develop an understanding of the project in key and sensitive views which are discussed in Section 8.

6. Landscape Character

Landscape Units are based on areas with similar visual characteristics in terms of topography and features, such as creeks and drainage lines, soil, vegetation and land use. The following sections describe the underlying patterns of these elements to derive the landscape units within the viewshed.

The Delburn Wind Farm is set within an area of vegetated hills (plantations).

Existing infrastructure includes roads, telecommunication towers, transmission lines, power lines as well as existing power infrastructure in the north-eastern areas.

6.1 Topography

The Project and the study area are located within the Latrobe Valley and part of the Strzelecki Ranges.

The topography within the study area is predominantly hilly and ranges in elevation from 25 m on the outskirts of Traralgon to 740 m at Mt Tassie on the outskirts of the viewshed.

6.2 Vegetation

Vegetation within the viewshed is varied. It includes plantation vegetation, natural forested areas, roadside vegetation, windbreak/buffer planting within farm areas and garden planting around residences. Figure 6-1 shows an example of both native hardwood and exotic pine plantations from within the project viewshed.



Figure 6-1: Vegetation example – Plantation

Figure 6-2 shows an example of vegetation located in farming areas within the project viewshed.



Figure 6-2: Vegetation example – Farming areas

Vegetation includes areas of remnant and revegetation along creek lines, valleys and gullies as well as fence lines, hilltops and ridges. There are also many large areas of native forest, national and state parks and timber plantations.

Figure 6-3 shows road-side vegetation that is found within the verges along the majority of major roads including the Strzelecki Highway and other local and minor roads.



Figure 6-3: Roadside vegetation within the viewshed

The vegetation confines and filters views across much of the landscape.

6.3 Land Use

Land use and status within the relevant planning schemes assist to understand the significance of an area as identified within the relevant planning schemes and therefore its sensitivity to visual change. This is due in part to the permissible use and prevalence of that use within an area and the level of protection afforded to that area under the provision of the planning schemes.

The dominant land uses within the viewshed of the Project include:

- Managed timber plantation and forestry;
- Farming and agriculture;
- Open-cut coal mines;
- Power stations.
- State and National parks
- Townships; and
- Water storage, cooling ponds and waterways.

These land-uses are broadly defined by land-use zones within the relevant planning schemes. Areas and uses that are potentially sensitive to the development of a wind farm from a landscape and visual perspective include townships, areas of rural residential development and areas such as state and national parks. The consideration of dwellings in farming zones is typically confined to locations in proximity to the dwelling, rather than the whole of the landholdings. The objective of the farming zone seeks to protect the land for agricultural and farming uses which are recognised as having potential offsite impacts to amenity including noise, odour, dust and in some instances, visual impacts through buildings structures and seasonal changes. These areas are different from land zoned Rural Residential where such areas are established and recognises as lifestyle properties in rural areas.

The Latrobe Valley brown coal electricity generators supply around 90% of Victoria's electricity. The region is recognised as the powerhouse of Victoria through its open-cut coal mines and power stations. The brown coal resources prevalent throughout the areas comprise some of the largest in the world. These areas are recognised by the application of Special Use Zones which, subject to further studies and approvals, preserve and contemplate change of the landscape. There are also many exploratory or active mining leases across these areas.

Figure 6-4 shows the core power stations, associated open-cut coal mines, substation locations and the high-voltage power line network.

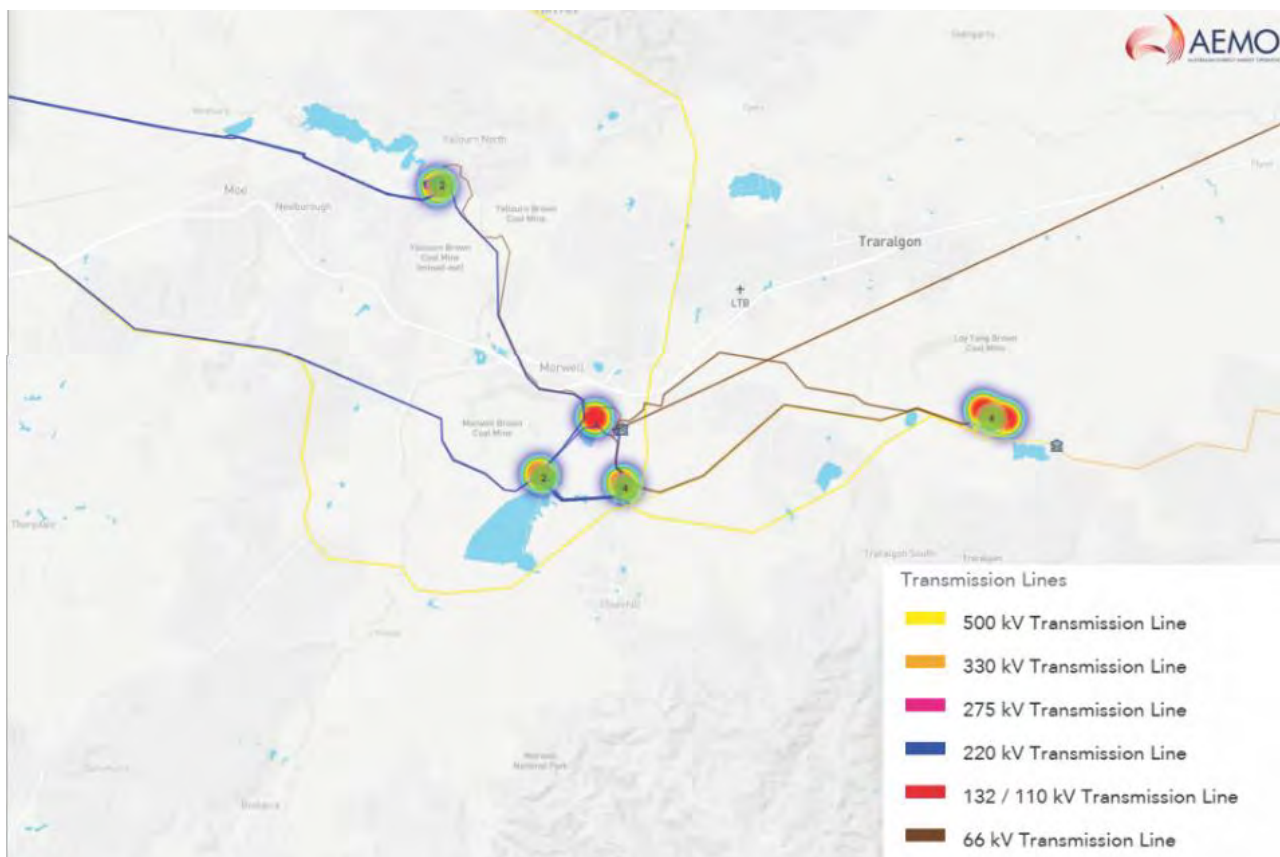


Figure 6-4: Energy Infrastructure (Source: <https://www.aemo.com.au/aemo/apps/visualisations/map.html>)

The majority of the infrastructure is located in the area to the north and east of the Project, with existing 500 kV (shown in yellow) and 220kV (shown in blue) transmission lines that run through the northern section of the Project.

The presence of open-cut coal mines and power stations, supported by high-voltage and domestic scale power lines, in combination with the protection of these areas within the PPF provides a visual reminder and connection to the important role the Latrobe Valley region plays to the state's electricity security.

This is further supported by the various instruments within the local and state planning schemes, such as the State Resource Overlay (SRO) discussed in Section 5 of this report. The implications of such strategies will be explored with regards to landscape sensitivity and land use in this assessment.

6.4 Landscape Units

There are six distinct landscape character types in the area surrounding the proposed Delburn Wind Farm. These have been assessed based on land use, topography and vegetation. These landscape character types can be defined as the following:

6.4.1 Landscape Unit 1a – Townships

Townships are characterised by a cluster of residential dwellings around the main street with shops. Some townships have parks and reserves as well as community-orientated buildings.

Vegetation within rural communities and townships are typically located within road reserves and residential gardens.



Figure 6-5: Landscape Unit 1a – Township examples



Figure 6-6: Landscape Unit 1a – Township example

6.4.2 Landscape Unit 1b – Rural Residential

Rural Living or Rural Residential are areas of residential land uses outside of townships that are not inherently linked to agriculture or other rural industries.

This landscape type is valued for its natural-appearing or 'rural' amenity but does generally include a number of built features, including neighbouring agricultural or horticultural infrastructure and machinery, tourism-related land uses and the road network.



Figure 6-7: Landscape Unit 1b – Rural Residential example



Figure 6-8: Landscape Unit 1b – Rural Residential example

6.4.3 Landscape Unit 2a – Cleared Flat Farmland

Landscape Unit 2a – Cleared Flat Farmland are areas used primarily for agricultural purposes. There are many instances of constructed elements within this landscape type, including the road network, transmission lines, farm buildings and fences.



Figure 6-9: Landscape Unit 2a – Cleared Flat Farmland example

6.4.4 Landscape Unit 2b – Cleared Hilly Farmland

Landscape Unit 2b – Cleared Hilly Farmland is highly modified, given the historic clearance of native vegetation. The intersection of rolling hills and deeply incised valleys provides for a diversity of framing of views that are either closed and confined or reveal longer views across the valley floor and to the elevated hills in the distance.



Figure 6-10: Landscape Unit 2b – Cleared Hilly Farmland example



Figure 6-11: Landscape Unit 2b – Cleared Hilly Farmland example

6.4.5 Landscape Unit 3 – Industrial / Mining

A large part of the area to the east and northeast of the Project is within the area of land in the SUZ1 and includes many operating coal mines and power stations as well as the recently closed Hazelwood Power Station. Within these areas are the extraction pits, which are open, partially rehabilitated or fully rehabilitated, operating and transitioning power stations and the many overhead high voltage powerlines. The images below show the character of the area within the land in the SUZ1.

Figure 6-12 shows Hazelwood Power Station, Figure 6-13 shows Yallourn Power Station from the off ramp of the Princes Freeway with the water treatment ponds south west of Morwell and Figure 6-14 shows an example of overhead powerlines within the area. These images were taken before the removal of the stacks on May 25, 2020.



Figure 6-12: Landscape Unit 3 – Industrial/Mining example (Hazelwood Power Station)



Figure 6-13: Landscape Unit 3 – Industrial/Mining example (Yallourn Power Station)



Figure 6-14: Landscape Unit 3 – Industrial/Mining example (Transmission Line)

6.4.6 Landscape Unit 4a – Forested hills (Natural)

Landscape Unit 4a – Forested Hills generally consists of rolling or dramatic hills with large sections of natural vegetation. This landscape is attractive as it contains areas that appear pristine or natural.



Figure 6-15: Landscape Unit 4a – Forested Hills (Natural) example

6.4.7 Landscape Unit 4b – Forested Hills (Plantation)

Landscape Unit 4b consists of rolling hills that are vegetated with ordered plantation vegetation. This landscape is attractive when vegetated.



Figure 6-16: Landscape Unit 4a – Forested Hills (Plantation) example



Figure 6-17: Landscape Unit 4a – Forested Hills (Plantation) example

The colours and tones of these areas under pine plantation contrast to areas of native forest or timber plantations. These areas are regularly modified through timber harvesting.

6.4.8 Landscape Unit 5 – Lakes and Waterways

There are a number of waterways, catchments, streams and lakes within the viewshed of the Delburn Wind Farm. These include the larger rivers of Morwell and Latrobe Rivers and the more local catchments of Little Morwell River and Middle Creek. There are also several constructed lakes such as the Hazelwood Pondage, which were constructed for the functional purpose of cooling the Hazelwood Power Station, which have now been adopted as community assets.

Over time the Morwell River has been impacted by the various mining and extractive activities across its natural alignment, which has resulted in it being diverted from its natural alignment on a number of occasions. The resulting profile and alignment of the streambed can be observed along the river's lower reaches within the viewshed particularly where the Strzelecki Highway crosses the river. Nonetheless, Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value.

It must also be contemplated that as existing coal mines seek to close and transition to care and maintenance there may be several additional mining pits that transition to a pit lake and recreational asset to the community.



Figure 6-18: Landscape Unit 5 – Morwell River Diversion

Figure 6-19 shows the Narracan Falls and reserve to the northwest of the Project.



Figure 6-19: Landscape Unit 5 – Narracan Falls

Other lakes and waterways within the viewshed include Narracan Falls and Lake Narracan.

6.4.9 Landscape Unit 6 – National and State Parks

National or State Parks/Reserves are areas of dramatic topographical features, often heavily vegetated with native vegetation. These areas appear pristine and may serve as landmarks or vantage points. These areas may contain minor development, such as unpaved/low-traffic roads, walking or cycling trails.



Figure 6-20: Landscape Unit 6 – National and State Parks

6.5 Landscape Sensitivity

Landscape sensitivity is in part a measure of the ability of a landscape to absorb visual change based on attributes of a particular landscape. The sensitivity of the previously described landscape units will depend upon several attributes, such as:

- **Location.** The sensitivity of a potential viewer varies according to location. For example, visitors to a National Park where the landscape appears untouched or pristine will be more sensitive to the imposition of new or artificial elements within that landscape. The same viewer travelling along a rural highway, which contains existing examples of modifications and artificial elements, will be less sensitive to the presence of new elements. Modifications or artificial elements are not confined to vertical structures or built form, they also include removal of native vegetation, visibility of roads, tracks, fences and other rural infrastructure all of which decrease the sensitivity of a landscape to further change.
- **The rarity of a particular landscape.** Landscapes that are considered rare or threatened are valued more highly by viewers.
- **The scenic qualities of a particular landscape.** Landscapes that are considered scenic are also those that are considered sensitive. They often contain dramatic topographical changes, the presence of water, coastlines, and other comparable features. The presence of modifications or artificial elements (including built form, roads, tracks, fences, and silos), as well as farming practices including land clearing, cropping and burning can decrease the sensitivity of a landscape's scenic qualities.

The landscape within the viewshed includes many constructed elements including new dwellings, structures and sheds, high voltage transmission line towers, mining activities, power infrastructure and other interventions.

The landscape sensitivity of the Cleared Farmland Landscape Unit is considered low. It is not a rare or threatened land-use or character and is common across a large area of Victoria. This landscape undergoes visually apparent change both on a regular basis and progressively over time. Rural activities such as grazing, tractors, crop cycles and other farming changes associated with farming and agriculture are constant reminders of human influence on the landscape. However, it must be recognised that some people value the visual aspects of cleared farmland with minimal signs of mechanised construction such as houses, farm sheds and the like. The presence of wind turbines may be perceived as a high visual impact due to the presence of large-scale structures on a rural landscape to these viewers, notwithstanding that the landscape is already highly modified by human activity.

Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value. Due to the modified nature of the Morwell River, the sensitivity of the would be rated as Moderate. While other lakes and waterways within the viewshed such as Narracan Falls and Lake Narracan would have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value.

The landscape sensitivity of the Forested Hills (Natural) Landscape Unit is considered moderate to high, as although it too is relatively common, it appears more pristine or natural than the Forested Hills (Plantation) and Cleared Farmland landscape units.

The Townships Landscape Unit is considered to have a moderate sensitivity. This is based on a higher number of residents and the setting. The village settlement generally has limited views to the surrounding landscape which is screened by buildings and roadside vegetation.

Table 6-1 rates the sensitivity of the various landscape units within the viewshed of the Delburn Wind Farm.

Table 6-1: Landscape Unit Sensitivities

Landscape Unit	Sensitivity
Unit 1a – Townships	Moderate - Built form and other visual elements reduce the visual sensitivity of these areas. However, as these are urban areas with many houses, the landscape sensitivity is rated moderate.
Unit 1b – Rural Residential	Moderate-High - While these areas are valued for their 'natural-appearing' or rural landscape amenity, they have modified landscapes within zones that are set aside for rural related industries such as farming or extractive resources, and thus inherently contain land uses with potential off-site amenity impacts.
Unit 2a – Cleared Flat Farmland	Low – Highly modified, contains visible infrastructure, is not topographically dramatic and does not contain large bodies of water.
Unit 2b – Cleared Hilly Farmland	Low to Moderate – Highly modified, by way of clearing of native vegetation. The intersection of rolling hills deeply incised valleys provides for a diversity of framing of views that are either closed and confined or reveal longer views across the valley floor and to the elevated hills in the distance.
Unit 3 – Industrial / Mining	Low - Highly modified landscape.
Unit 4a – Forested Hills (Natural)	Moderate to High - This landscape is attractive as it contains areas that appear pristine.
Unit 4b – Forested Hills (Plantation)	Low to Moderate - This landscape is attractive when vegetated. This landscape is European in appearance and regularly modified through timber harvesting.
Unit 5 – Lakes and Waterways	Moderate to High - Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value. Due to the modified nature, the sensitivity of the Morwell River would be rated as Moderate
Unit 6 – National and State Parks	High - This landscape is attractive as it contains areas that are and appear pristine. Encroaching development into this landscape type has increased the rarity of this landscape.

The landscape units and sensitivity ratings will form the basis of the visual impact of views from publicly accessible locations.

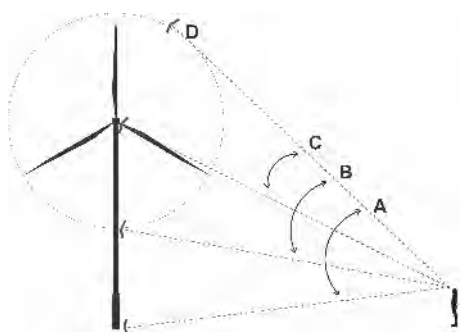
Landscape sensitivity from individual residential properties will always be assessed as "high" as for a resident, their home will always be a highly sensitive location and disturbances to a resident's views must always be considered to have the highest degree of sensitivity.

7. Seen Area Analysis

A Seen Area Analysis (SAA) identifies patterns of theoretical visibility and potential views towards the project. The SAA is a theoretical model that is based upon key Project infrastructure and the topography of the surrounding landscape. The SAA does not include features such as vegetation, buildings or structures that will assist to screen or filter views and is therefore conservative in its' assessment of visibility and views.

The patterns of theoretical visibility assist to determine locations where the Project is potentially the most visible and guides the selection of representative viewpoints to consider the views to the site and to the proposed location of wind turbines, key vantage points, major roads and tourist routes, and residential clusters sufficient to give a sense of the Project and its setting.

The Seen Area Analysis can map patterns of visibility for either the project as a whole or in key components. Sections that are relevant to views and visual impact are set out below.



- Zone A – Areas from which one or more Turbines are visible in their entirety;
- Zone B – Areas from which the entire swept path of one or more Turbines are visible;
- Zone C – Areas from which nacelle and above of one or more Turbines are visible; and
- Zone D - Areas from which tip of the blade of one or more Turbines are visible

Figure 7-1: Visibility parameters (not to scale)

Zone A includes locations that have the potential to view a wind turbine in its entirety. A viewer at this location will theoretically be able to see "any part of the wind turbine blades" which includes Zone B, C and D.

Figure 7-2 shows the GIS-based mapping of Zones A, B, C and D.

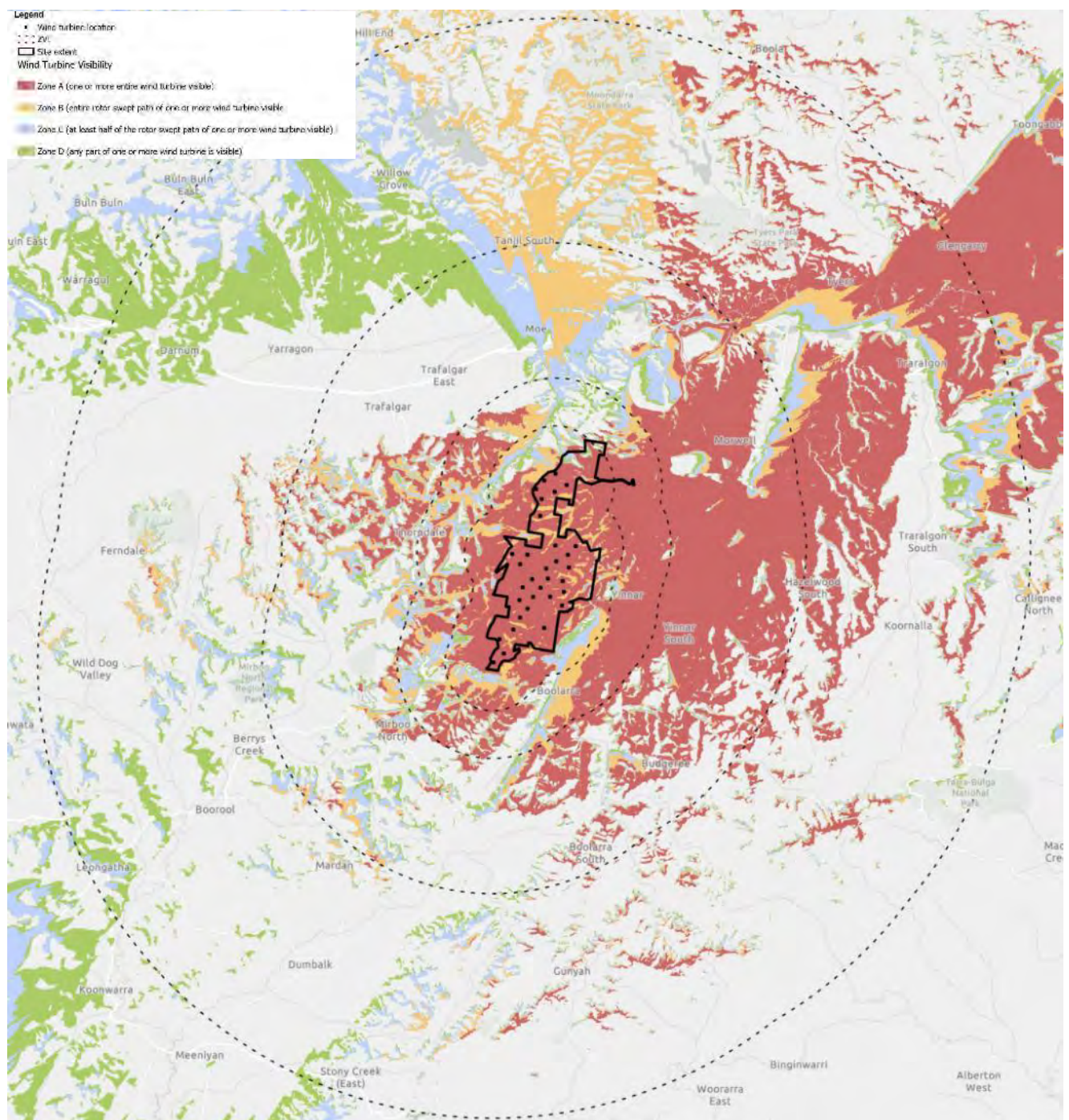


Figure 7-2: Areas of potential wind turbine visibility

The mapping of turbines in their entirety (Zone A) or the areas from which a blade tip is visible (Zone D) is too prescriptive and is not indicative of overall visibility of the Project. Mapping those areas where the swept path (Zone B) and the nacelle and above (Zone C) are more useful when selecting viewpoints in which to assess the likely visual impact of the Project.

Figure 7-3 shows the visibility patterns for Zone C (nacelle and upper portion of the swept path) within the Project viewshed. This is a conservative assessment in that the mapping for Zones A and B tend to show smaller areas of visibility. This is because the modelling will exclude areas that may not “see” part of these features and are therefore excluded from the results. The mapping for each of the zones is included in Appendix A.

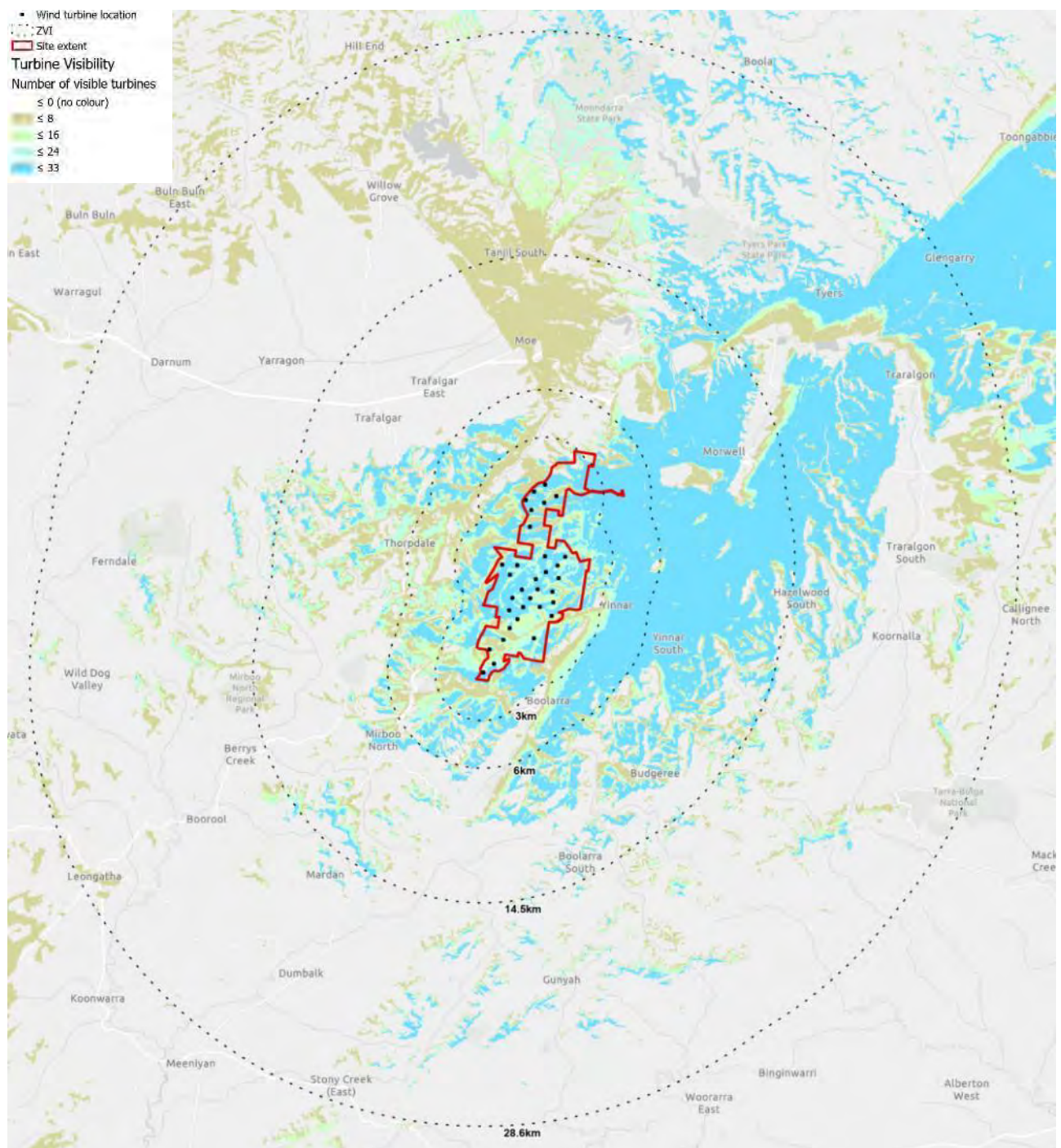


Figure 7-3: SAA – Zone C (Nacelle and above)

The areas with the greatest potential for visibility of the majority of the wind turbines are those areas to the east and northeast. These areas are predominantly within land zoned SUZ1 which include the many large areas of large open cut coal mines that are either operating or transitioning and power stations.

The SAA highlights the dynamic undulating nature of the topography to the west and south of the Project area which will limit views towards the turbines.

It is emphasised that this modelling is theoretical and does not consider vegetation seen in many areas across the project viewed.

This modelling assisted in the selection of publicly accessible viewpoints assessed in the following Section.

8. Publicly Accessible Viewpoints

This section will assess the potential visual impact of the proposed Delburn Wind Farm from publicly accessible locations. Viewpoints have been selected to consider the location of the proposed wind turbines from key vantage points, major roads, tourist routes, townships, local roads, parks and trails sufficient to give a sense of the Project and its setting following the requirements set out in clause 53.32 Wind Energy Facility of the VPP.

8.1 Viewpoint Locations

79 viewpoints have been selected as representative of the publicly accessible locations in and around the wind farm. Figure 8-1 shows the locations of each of these viewpoints.

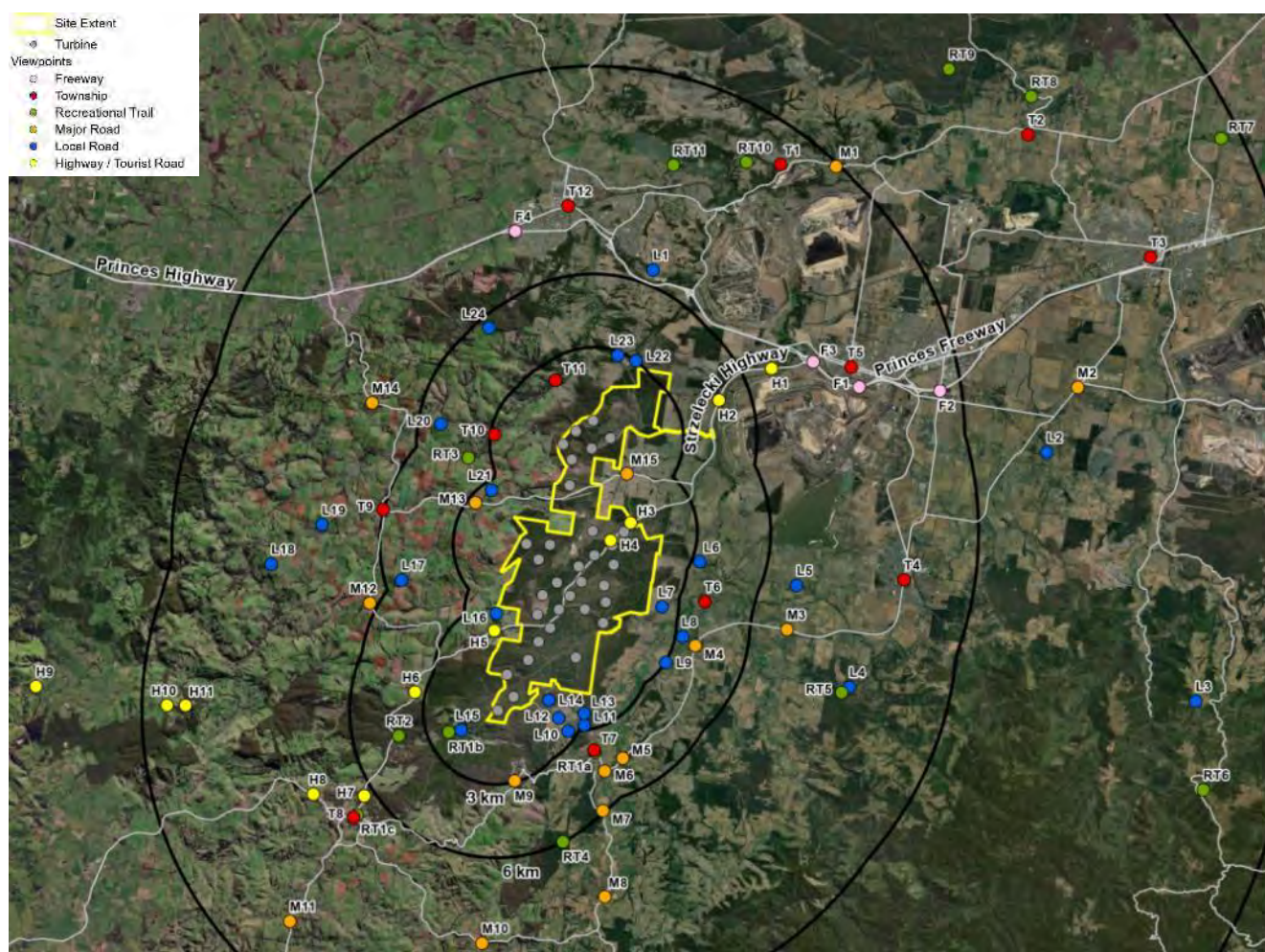


Figure 8-1: Overall viewpoint map

Viewpoints have been selected where the SAA model identified the greatest potential for turbine visibility or where these locations coincide with key vantage points or viewing locations. This has been done to ensure the “worst case” visual impact is being assessed. For this reason, the majority of viewpoints are within 15 km of the proposed wind turbines. Beyond this distance the proposed wind turbines will not be a dominant feature in views or will not be visible due to intervening topography or terrain. (Refer to Section 4 – The Viewshed).

Figure 8-2 shows the viewpoints mapped on the SAA with their theoretical visibility.

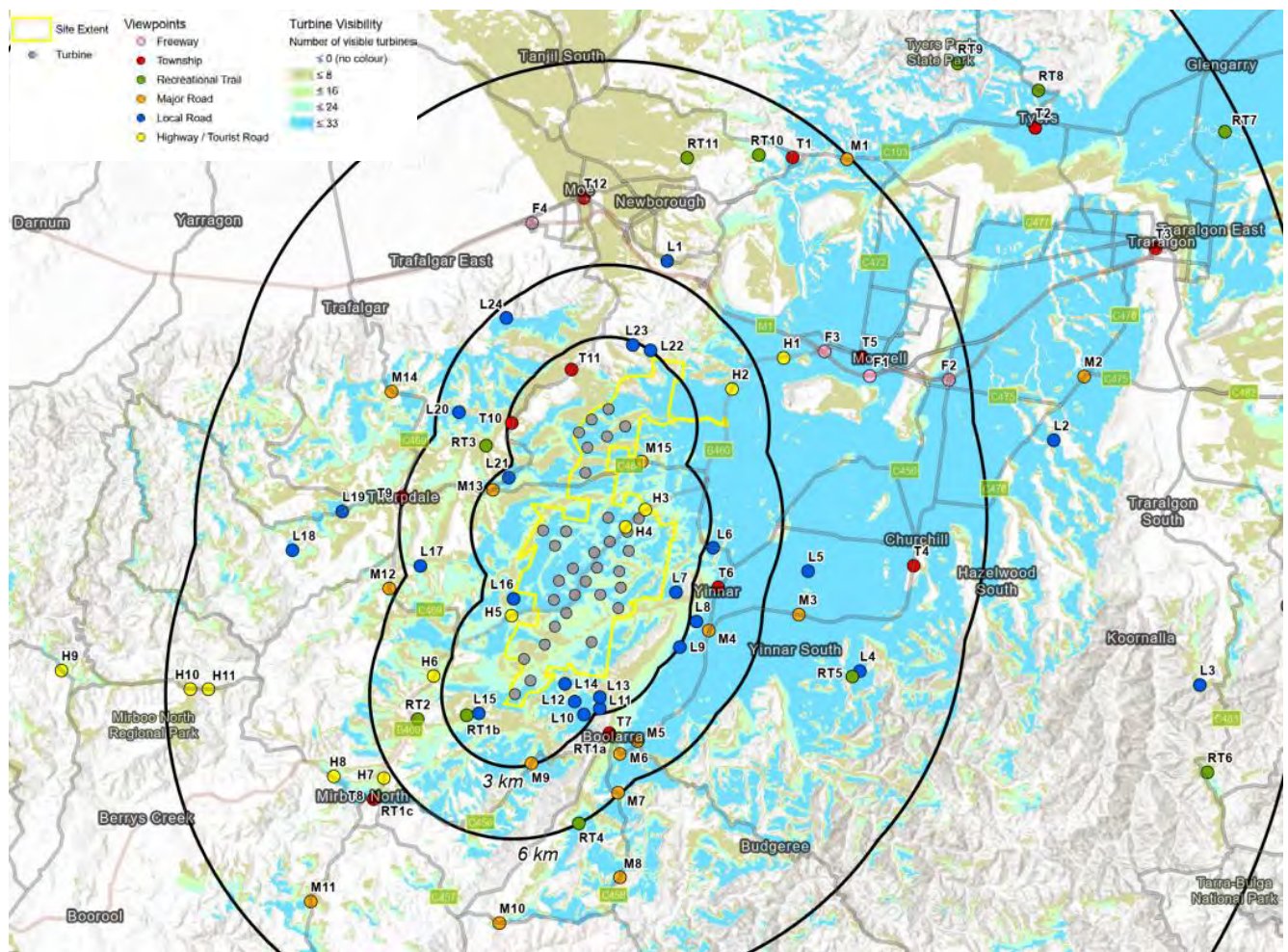


Figure 8-2: Overall viewpoint map with SAA

The visual impact from each of these 79 viewpoints assists to compile the overall visual impact of the proposed Delburn Wind Farm upon the surrounding area. Viewpoints have been grouped to assist with the assessment of areas set out in the National Wind Farm Guidelines which require the consideration of views from townships and urban areas, significant conservation and recreation areas, National Parks and State forests, water features, tourist routes and walking tracks and major roads. In doing so, these groupings also assist to discuss and ascertain the overall visual impact from different areas or locations. For these reasons the 79 viewpoints are set out under the following groupings:

- Freeways (Viewpoints F1-F4)
- Highways and Tourist Routes (Viewpoints H1-H11)
- Major Roads (Viewpoints M1-M15)
- Local Roads (Viewpoints L1-L24)
- Townships (Viewpoints T1-T12)
- Recreational trails, parks and elevated lookouts (Viewpoints RT1(a-c)-RT11)

The visual impact of the wind farm from locations is also informed by photomontages which have been prepared for 10 locations H1, H5, L7, M6, L10, L14, L21, L22, M3 and T6. for the Revised Layouts. Two wireframes have also been prepared for Viewpoints L15 and T9 of the Concept Layout (v1.5, being 53 wind turbines) only.

Virtual reality scenes were prepared from six locations around the project and in locations where turbines would be wholly visible or in part. The virtual reality scenes were made available at the community consultation and

drop-in days undertaken in March 2020. The six locations were selected to provide for a range of viewing distances, view angles and landscape settings to assist the community to engage with the project and understand how it would sit in the landscape should the Project be approved. The six selected locations included:

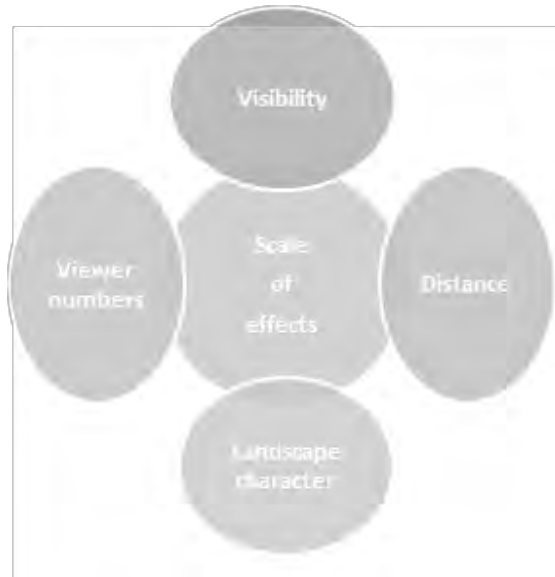
- Darlimurla Road
- McDonalds Track
- Morwell Thorpdale Road
- Strzelecki Highway
- Ten Mile Creek Road; and
- Yinnar Township.

Figure 8.3 shows the locations where virtual reality scenes have been prepared.



8.1.1 Assessment of Visual Impact

The assessment of the visual impact of a wind farm development from the public domain is based upon four criteria, namely visibility, distance, landscape character and viewer numbers.



8.1.2 Visibility

The visibility of the Project elements can be affected by topography, vegetation, built form and infrastructure. Where no turbines are visible there will be no visual impact.

8.1.3 Distance

Distance ranges or Zones of Visual Influence (ZVI) are one parameter used within this assessment to determine the influence that distance has on assessing the visual impact of the project. For example, the visibility of turbines is less at 28.6km than the visibility of a turbine seen from 3.0km.

8.1.4 Landscape Character

The landscape character and the sensitivity of the landscapes within the viewshed have been discussed in Chapter 6.

8.1.5 Viewers Numbers

In this visual assessment, it is important to differentiate between a “visual impact” and a “landscape impact”. Viewer numbers are important in the assessment of a visual impact as if few people see a particular development then the visual impact is reduced, even though there may be a significant change to the landscape and hence a large landscape impact.

When assessing the viewer numbers at viewpoints along roads within the viewshed, the viewer numbers have been based on road classifications such as Freeways are rated as high viewer numbers, B Class Roads as moderate to high, C Class roads as moderate and single lane asphalt and unsealed roads are given a low level of viewer numbers.

8.1.6 Scale of Effects

The overall visual impact of the Project from an indicative publicly accessible viewpoint has been assessed using the following scale:

- **Nil** – There are no visible turbines and the Project will be screened by topography, vegetation or buildings and structures.
- **Negligible** – minute level of effect that is barely discernible over ordinary day-to-day effects. The assessment of a 'negligible' level of visual impact is usually based on distance. That is, the wind farm is at such a distance that, when visible in good weather, it would be a minute element in the view within a modified landscape. If there is limited visibility of turbines such as tip of blades only due to intervening topography, vegetation or buildings and structures the visual impact would also be considered negligible.
- **Low** – visual impacts are those where the Project is noticeable but that will not cause significant adverse impacts. The assessment of a "low" level of visual impact will be arrived at if the rating of several of the four criteria, (visibility, distance, viewer numbers and landscape sensitivity), are assessed as low.
- **Medium/Moderate** – visual impact may occur when several of the four assessment criteria are considered as higher than "low" or the visual effects can be mitigated/remedied from an initial rating of High. This will be moderated by the context of the existing view and the modifications within the landscape
- **High or unacceptable adverse effect** – extensive adverse effects that cannot be avoided, remedied or mitigated. The assessment of a "high or unacceptable adverse effect" from a publicly accessible viewpoint requires the assessment of all criteria to be high. For example, a highly sensitive landscape, viewed by many people, with the proposed wind farm in close proximity and largely visible would lead to an assessment of an unacceptable adverse effect.
- **Positive Visual Impact** – is a visual change that improves the outlook or view. For renewable energy projects, a positive visual impact may be experienced where the individual viewer appreciates the view of wind turbines in the landscape or the link to renewable energy. This positive reaction is supported by the findings in numerous community perceptions surveys undertaken within Australia and globally.

The following sections will assess views from Freeways, Highways and Tourist Routes, Major Roads, Local Roads, Townships and Recreational Trails, Parks and Elevated Lookouts to build up an overall assessment of the visual impact of the proposed Delburn Wind Farm.

A summary table is provided at the end of each of the viewpoint assessments to outline the key quantitative elements that form part of the views and visual impacts. The overall visual impact considers both qualitative and quantitative criteria which is discussed at each viewpoint. The sum of the quantitative considerations alone does not form the basis of the overall visual impact.

8.2 Freeways

Four viewpoint locations (F1-F4) have been selected as representative of views from the Princes Freeway which is to the north of the Project. Viewer numbers from the freeway would be assessed as high while the landscape sensitivity would vary dependent on the location of the viewpoint.

The location of each viewpoint in proximity to the project is shown in Figure 8-4.



Figure 8-4: Freeway Viewpoint Locations

The location, co-ordinates, distance to the nearest turbine and prevalent landscape unit towards the wind farm are described in Table 8-1.

Table 8-1: Freeway Viewpoint Locations

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
F1	Princes Freeway	55H 447406, 5766936	10.3km SW (T01)	Unit 3
F2	Princes Freeway / Tramway Rd	55H 450708, 5766753	13.6km SW (T01)	Unit 3
F3	Princes Freeway / Strzelecki Hwy	55H 445526, 5767963	8.8 km SW (T01)	Unit 3
F4	Princes Freeway/Old Gippsland Rd	55H 433341, 5773312	8.4km SE (T03)	Unit 4b

8.2.1 Viewpoint F1 – Princes Freeway

Viewpoint F1 is located on the Princes Freeway approximately 300m south-west of the Commercial Road onramp.

The nearest turbine (T01) is approximately 10.3km south-west.

Figure 8-5 shows the view looking south-west from the Princes Freeway.

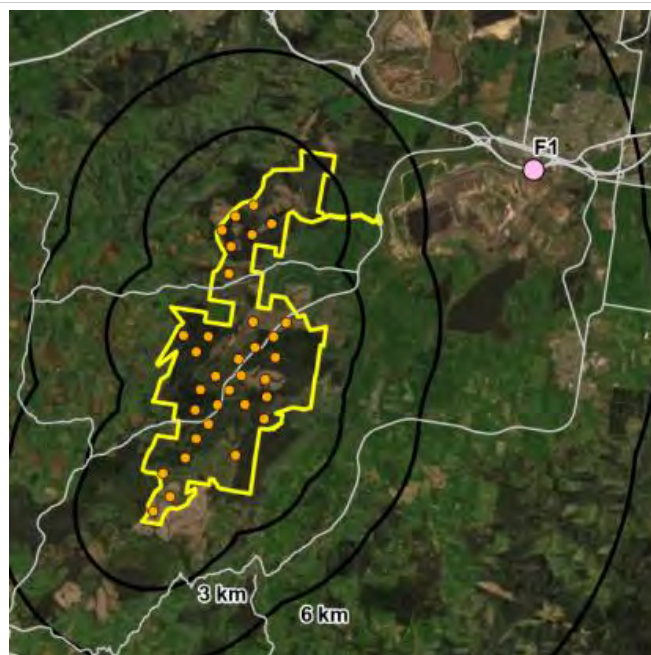


Figure 8-5: Viewpoint F1 – Existing view looking south-west

In this view, the proposed turbines would be visible along part of the elevated ridgeline in the background of the view. At a distance of approximately 10.3km, the turbines have the potential to be visible and can dominate the view. However, they would be visible through nearby transmission lines, rail infrastructure and over open-cut coal mines. It is understood that the areas of open-cut coal mines are in a state of transition through rehabilitation and closure of Hazelwood. It is however unknown what the final view in the area will comprise.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT F1 – PRINCES FREEWAY		
Distance	10.3km south-west (T01)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Freeway	High
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.2.2 Viewpoint F2 – Princes Freeway / Tramway Road Overpass

Viewpoint F2 on the Tramway Road overpass near the on ramp.

The nearest turbine (T01) is approximately 13.6km south-west.

Figure 8-6 shows the view looking south to south-west from the Tramway Road overpass.

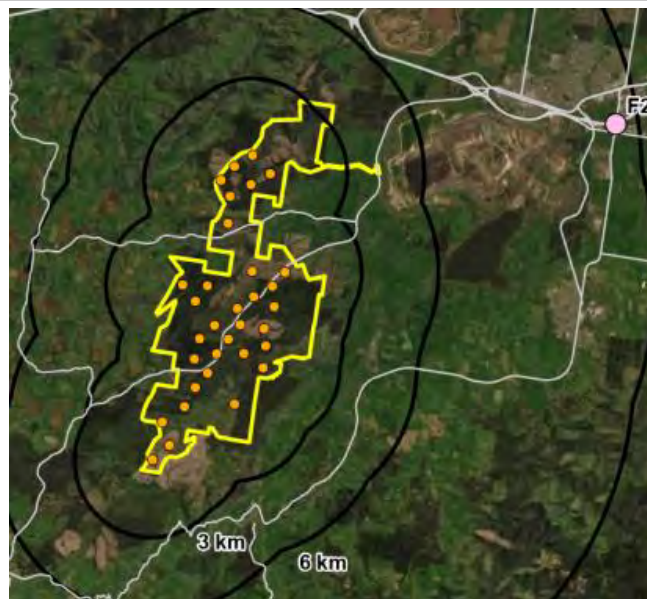


Figure 8-6: Viewpoint F2 – Existing view looking south to south-west

Views from the freeway are at speeds of approximately 100 km per hour with the turbines being oblique to the direction of travel. Turbines will be visible where breaks in roadside vegetation permit views beyond the freeway and these break line up with the project. Where views are available, they would be over a landscape that is highly modified to include open-cut coal mines and through substation station of transmission line infrastructure. At a distance of approximately 13.6km, the turbines have the potential to be visible, however, they will not be a dominant element in the view and would sit below existing infrastructure.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT F2 – PRINCES FREEWAY		
Distance	13.6km south-west (T01)	Potentially noticeable and can dominate landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Freeway	High
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.2.3 Viewpoint F3– Princes Highway - Strzelecki Highway Overpass

Viewpoint F3 is located on the Strzelecki Highway overpass of the Princes Freeway.

The nearest turbine (T01) is approximately 8.8 km south-west.

Figure 8-7 shows the view looking south-west from the Strzelecki Highway overpass at the Princes Freeway.

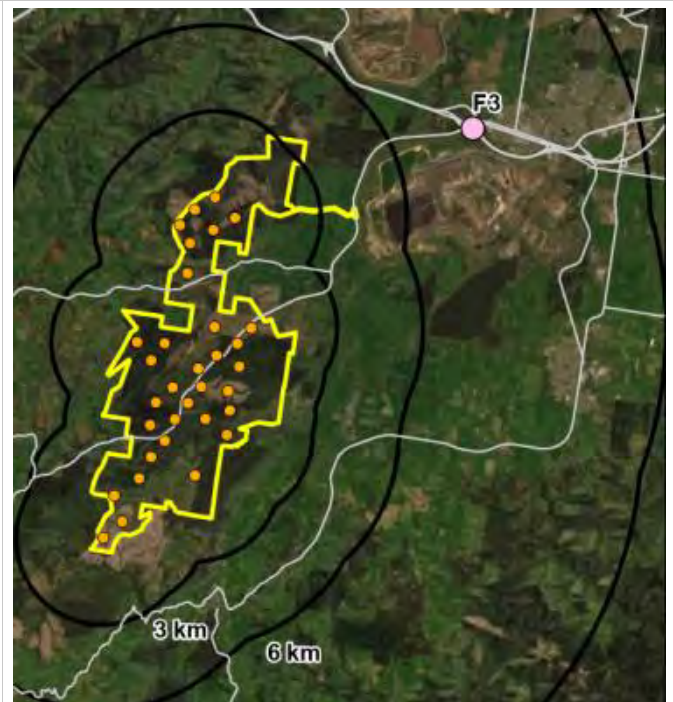


Figure 8-7: Viewpoint F3 – Existing view looking south-west

This elevated location will allow clear views to the existing pine plantations and turbines located at the northern end of the Project and the elevated hills of the Strzelecki Ranges in the background. Views from this location also include power stations, high voltage transmission lines and the Princes Freeway infrastructure.

In this view, the proposed turbines would be visible, however, due to distance and the short duration of this view, the turbines would not be visually dominant nor detrimental to views. Further, this viewpoint is not one that is sensitive, nor are the views towards the Project.

For these reasons, the overall visual impact would be **Low-negligible**.

VIEWPOINT F3 – PRINCES HIGHWAY - STRZELECKI HIGHWAY OVERPASS		
Distance	8.8km south-west (T01)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Highway/Freeway	Moderate-High
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.2.4 Viewpoint F4– Princes Freeway – Old Gippsland Drive Overpass

Viewpoint F4 is located on Old Gippsland Drive overpass where it crosses the Princes Freeway to the north-west of the Project.

The nearest turbine (T03) is approximately 8.4 km south-east.

Figure 8-8 shows the view looking south-east from the Old Gippsland Drive overpass.

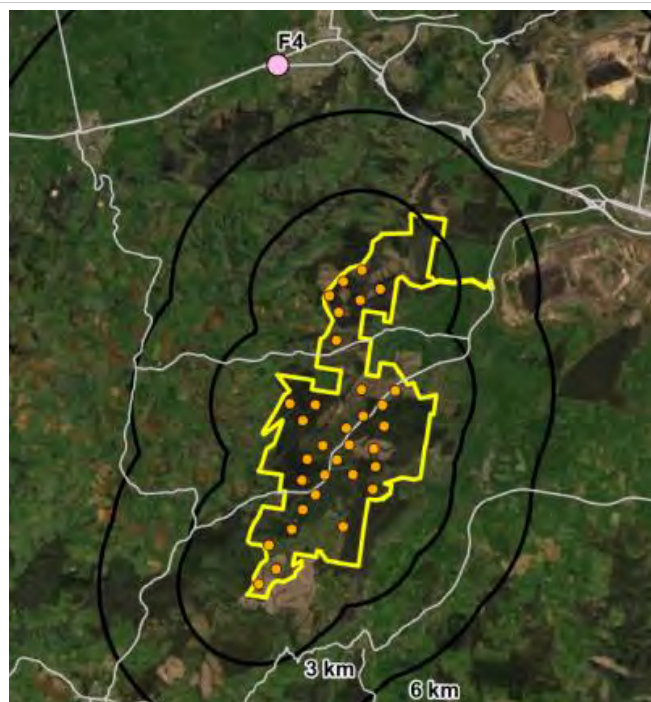


Figure 8-8: Viewpoint F4 – Existing view looking south-east

This elevated location was selected as it demonstrated the low setting of the freeway in the context of vegetation and topography to the south of the roadway.

Local vegetation and topography notwithstanding, the proposed turbines would be screened in these views by the low vegetated hill seen in the background of this view.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT F4 – PRINCES FREEWAY – OLD GIPPSLAND DRIVE OVERPASS		
Distance	8.4km South-east (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Freeway	High
OVERALL VISUAL IMPACT	NEGLECTIBLE-NIL	

8.2.5 Summary of Freeway Viewpoints

Table 8-2 summarises the four viewpoint locations selected from the Princes Freeway, the distance of the view to the nearest proposed wind turbine and the overall visual impact assessed for each view.

Table 8-2 Summary of views from Freeways

VP	Location	Nearest Turbine	Visual Impact
		Rev 3.4	
F1	Princes Freeway	10.3km SW (T01)	Negligible
F2	Princes Freeway / Tramway Rd	13.6km SW (T01)	Negligible
F3	Princes Freeway / Strzelecki Hwy	8.8 km SW (T01)	Low-Negligible
F4	Princes Freeway / Old Gippsland	8.4km SE (T03)	Negligible-Nil
OVERALL VISUAL IMPACT - FREEWAYS			NEGLIGIBLE

The overall visual impact on views from the Princes freeway is considered to be Negligible. The four selected viewing locations demonstrate the range of views afforded from the Princes Freeway to the north of the Project, which at its nearest point is approximately 6.0 km. Views range from clear open views over existing open-cut - coal mines and those that are transitioning to closure, to views where breaks in topography and vegetation allow longer views beyond the roadway. For locations that are nearer to the Project, views are either filtered by roadside vegetation and vegetation on the elevated hills to the north of the wind farm or are completely screened by topography and vegetation.

Further, views from the freeway are at speeds of approximately 100 km per hour, typically oblique to the direction of travel. Where the turbines are visible, they are at a distance where they are would not be visually dominant features in the view or over landscapes that are modified to include plantations, open-cut coal mines, power stations and a range of transmission lines and therefore of low visual value and low sensitivity to further change.

8.3 Highways and Tourist Routes

Highways and Tourist Routes within the viewshed include Grand Ridge Road which runs south from 10km south of Warragul to Mirboo North and then heads south-east and the Strzelecki Highway which runs through the middle of the Project.

Eleven viewpoint locations (H1-H11) have been selected as representative of the view and landscape character types within the viewshed.

Viewer numbers for these roads have been considered as moderate to high with the landscape sensitivity varying dependent on the viewing location and proximity to the Project.

The location of each viewpoint in proximity to the Project is shown in Figure 8-9.

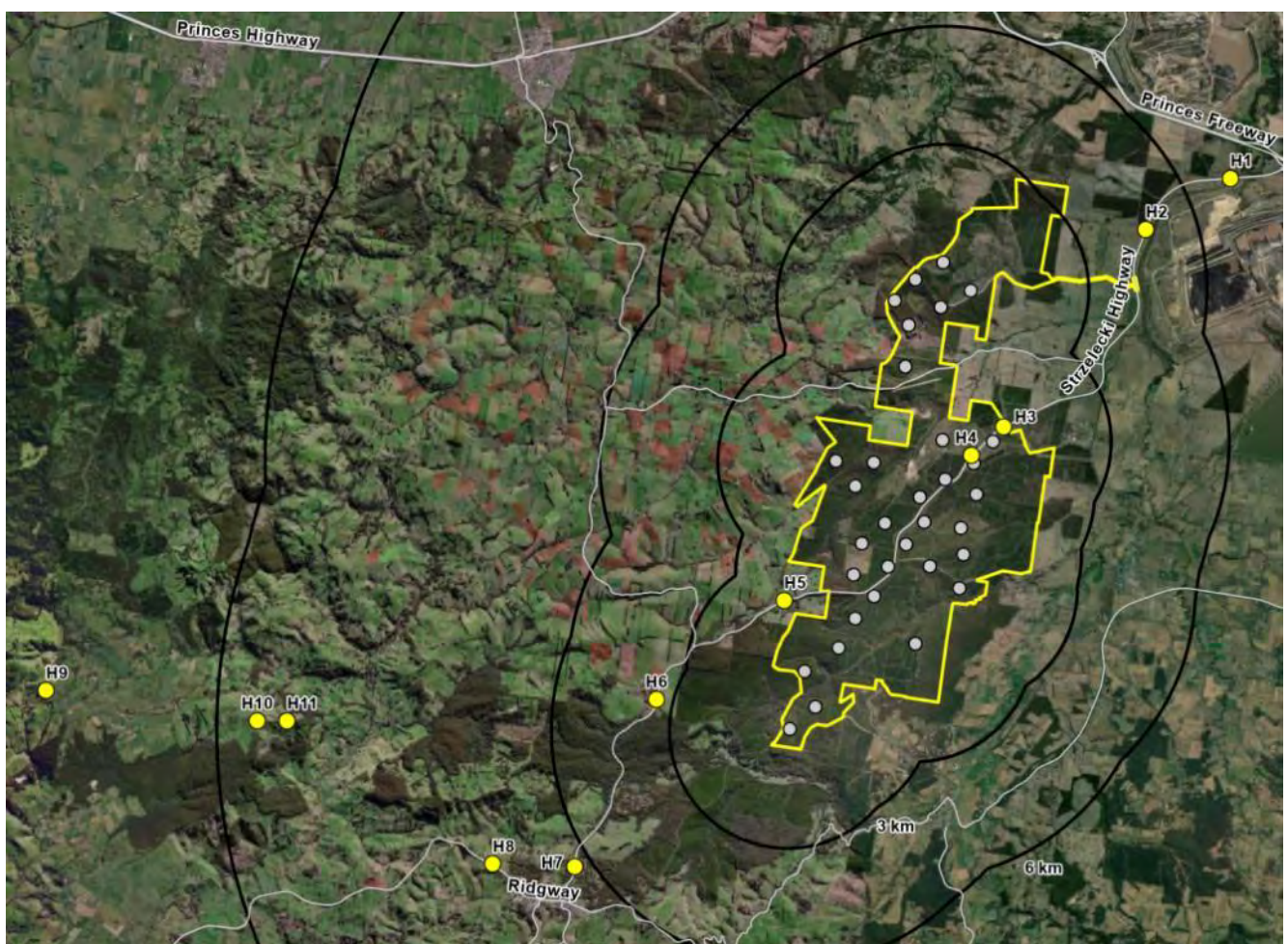


Figure 8-9: Highways and Tourist Routes

The viewpoint, GPS co-ordinates, distances to the nearest wind turbine and landscape unit in views towards the Project are described in Table 8-3.

Table 8-3: Highways and Tourist Routes

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
H1	Strzelecki Highway #1	55H 443821, 5767692	7.1 km SW (T01)	Unit 3
H2	Strzelecki Highway #2	55H 441670, 5766395	4.7 km SW (T01)	Unit 4b
H3	Strzelecki Highway #3	55H 438059, 5761381	460 m SW (T16)	Unit 4b
H4	Strzelecki Highway #4	55H 437239, 5760659	200m SE (T15)	Unit 4b
H5	Strzelecki Highway #5	55H 432486, 5756968	1.8 km SE (T28)	Unit 4b
H6	Strzelecki Highway #6	55H 429241, 5754456	3.4 km E (T33)	Unit 2a
H7	Strzelecki Highway #7	55H 427167, 5750208	6.5 km NE (T33)	Unit 2b
H8	Strzelecki Highway #8	55H 425081, 5750278	8.3km NE (T33)	Unit 2a
H9	Grand Ridge Road #1	55H 413736, 5754685	18.9km E (T33)	Unit 2b
H10	Grand Ridge Road #2	55H 419101, 5753913	13.5km E (T33)	Unit 2b
H11	Grand Ridge Road #3	55H 419858, 5753909	12.8km E (T33)	Unit 4b

8.3.1 Viewpoint H1– Strzelecki Highway #1

Viewpoint H1 is located on the Strzelecki Highway where it crosses the Morwell River Diversion approximately 570 m northeast of Marrett's Road.

The nearest turbine (T01) is approximately 7.1 km south-west.

Figure 8-10 shows the existing view from the Strzelecki Highway looking south-west.

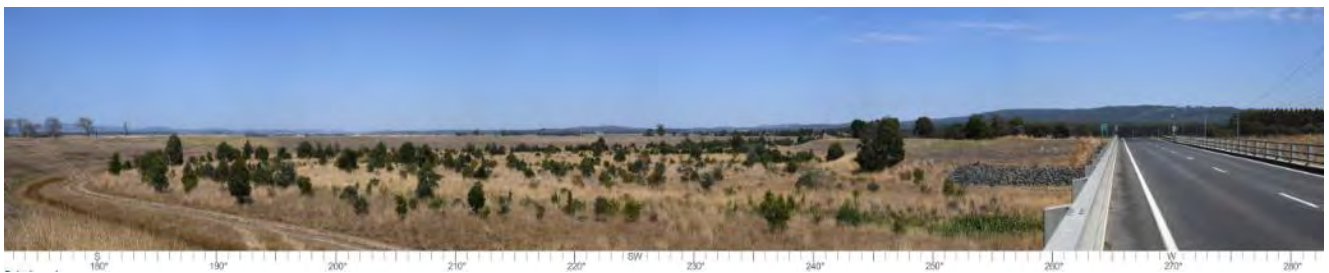
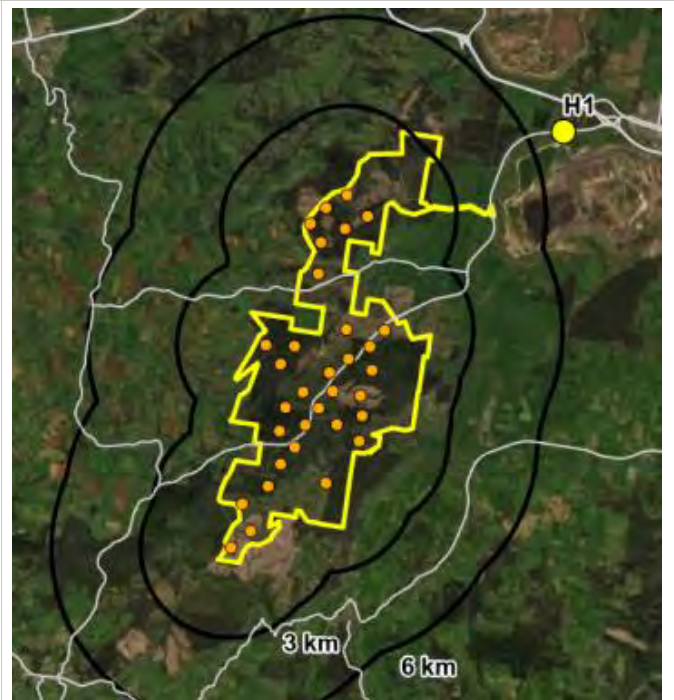


Figure 8-10: Viewpoint H1 – Existing view looking south-west

Figure 8-11 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.

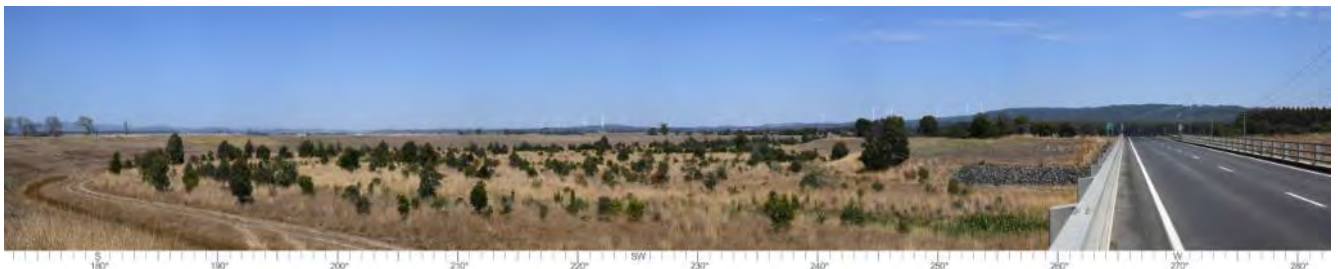


Figure 8-11: Viewpoint H1 – Photomontage Revised Layout (Layout 2.1)

Figure 8-12 shows an enlargement of the photomontage looking south-west from the Strzelecki Highway.

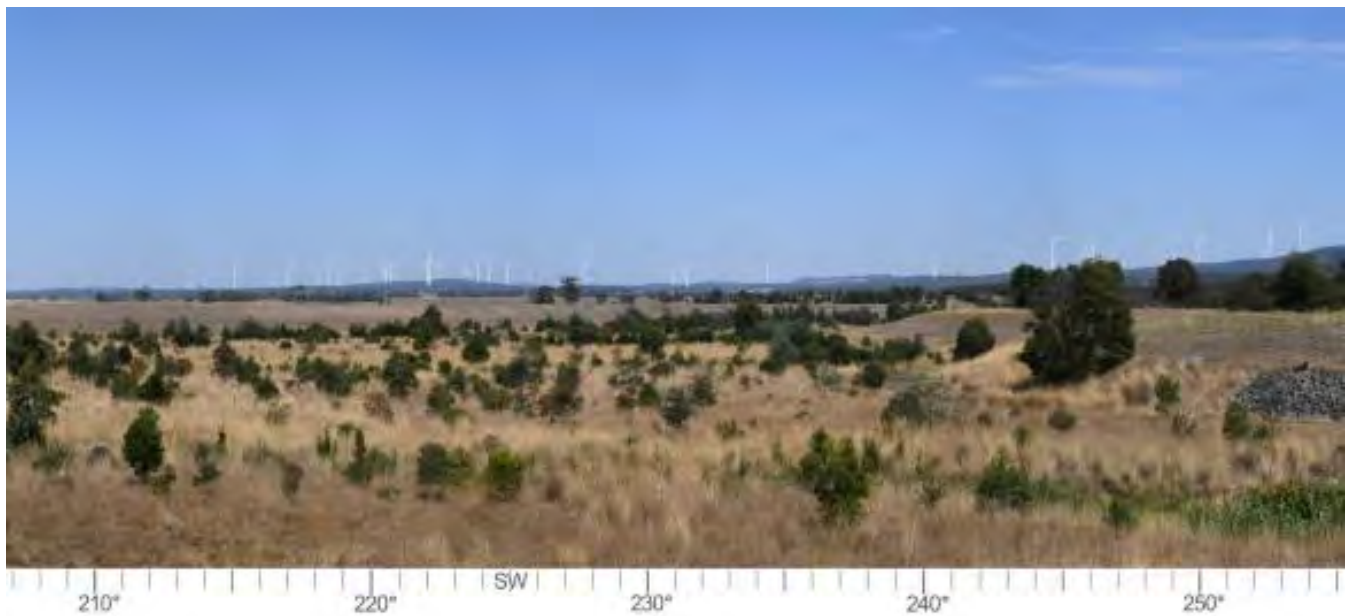


Figure 8-12: Enlargement Viewpoint H1 – Photomontage Revised Layout (Layout 2.1)

Views from this location include the Morwell River Diversion, revegetation areas, power lines and timber plantations. The proposed turbines would be located on the elevated hills and plantation areas in the background.

The photomontage shows that turbines, which would be at a distance of approximately 7.1km would be noticeable in views, however, they would not be visually dominant. For some viewers, the turbines may be considered to frame or accentuate to the topography of the site.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT H1 – STRZELECKI HIGHWAY #1		
Distance	7.1km south-west (T01)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.3.2 Viewpoint H2 – Strzelecki Highway #2

Viewpoint H2 is located on the Strzelecki Highway at the intersection of Deans Road.

The nearest turbine (T01) is approximately 4.7 km south-west.

The investigation area of the proposed terminal substation and battery storage area is approximately 2.0 km to the west. A separate approval is being sought for the terminal station and its' landscape and visual impacts will be assessed separately.

Figure 8-13 shows the view looking south along the Strzelecki Highway and west along Deans Road. The existing 220 kV transmission line which the Project is proposed to connect to, is located along the northern side of Dean's Road.

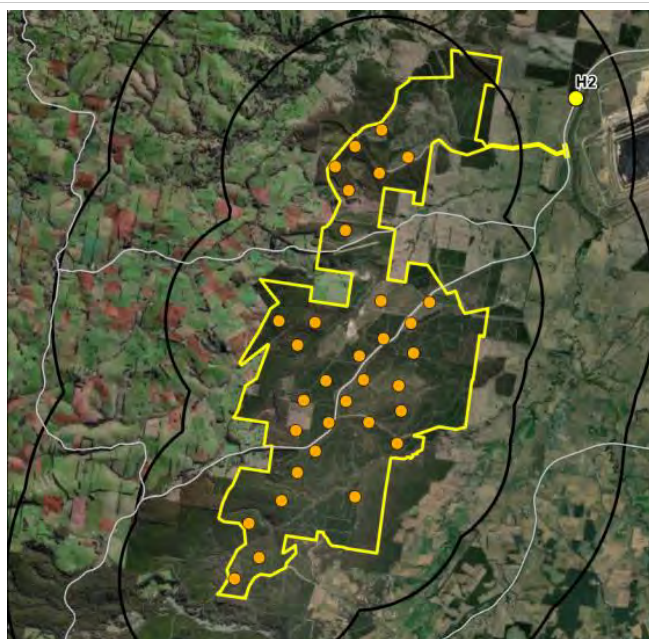


Figure 8-13: Viewpoint H2 – Existing view looking south-west along Strzelecki Highway

The proposed turbines will be to the left of the existing 220kV transmission line and right of the roadway roughly central to the image in Figure 8-13. Views further to the east of the Strzelecki Highway include the former Hazelwood mine, and power station.

At a distance of 4.7km, the turbines have the potential to be highly visible where breaks in roadside and nearby vegetation permit views to the south-west. The proposed battery storage area will sit to the right of Deans Road behind the small rise seen in Figure 8-13. Many views in this area including those towards the proposed turbines include permanent structures such as the high voltage transmission lines and modified landscapes that are not sensitive or protected and see regular visual change.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT H2 – STRZELECKI HIGHWAY #2		
Distance	4.7km south-west (T01)	Highly visible and can dominate the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW	

8.3.3 Viewpoint H3 – Strzelecki Highway #3

Viewpoint H3 is located on the Strzelecki Highway approximately 1.0 km northeast of the intersection of Smiths Road.

This location shows the view looking north where road users emerge from the established plantings with the plantations to the east and west of the road and the extensive native roadside vegetation. Longer views to the north include the elevated hills around Mt Baw Baw.

The nearest turbine (T16) is approximately 460m south-west (opposite direction). Several turbines will be located in the timber plantations further to the north of this view. Figure 8-14 shows the view looking north from the Strzelecki Highway.

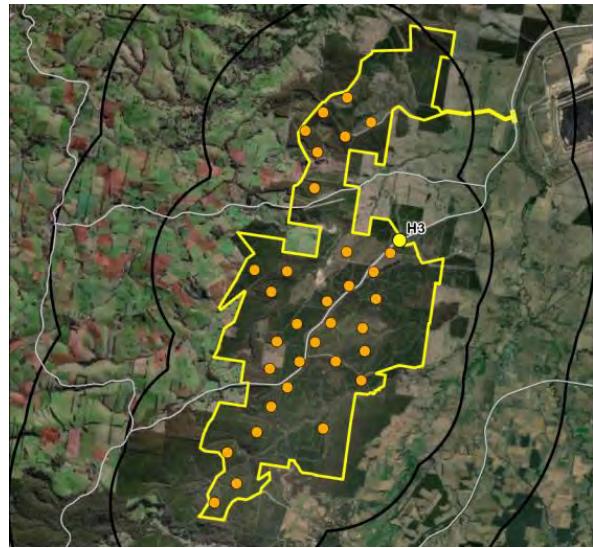


Figure 8-14: Viewpoint H3 – Existing view looking north to northeast

On clear days, views to the north include the elevated locations around Mt Baw Baw and the Baw Baw National Park. Over time, these views will be screened by the plantation timbers seen to the left and right of the view. This same view would be temporarily revealed upon timber harvesting.

Figure 8-15 shows the view looking west and shows the view for road users travelling south along the Strzelecki Highway before entering the stretches of roadside vegetation seen in the left of the view.



Figure 8-15: Viewpoint H3 – Existing view looking west

The northern cluster of turbines will be visible to the right of the Strzelecki Highway in Figure 8-15.

Views from this section of the highway would be temporary and available until such a time that the existing plantation timbers become further established. When available, views would include the Strzelecki Ranges further to the west and Baw Baw National Park to the north, visible through the existing dual circuit 500 and 220 kV power lines.

Although the turbines will be in close proximity to the road and seen by many people, views from this location would be fleeting and in transit only, with no roadside stops or pull-out bays where road users would pull over and take in views.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT H3 – STRZELECKI HIGHWAY #3		
Distance	460m south-west (T16)	Will always be visually dominant in the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW	

8.3.4 Viewpoint H4 – Strzelecki Highway #4

Viewpoint H4 is located on the Strzelecki Highway at the intersection of Smiths Road.

The nearest turbine (T15) is approximately 200m south-east.

This will also be the location of the operations and maintenance facility.

Figure 8-16 shows the view looking east from the intersection of Strzelecki Highway and Smiths Road through roadside vegetation. Smith Road is a local road providing access to forestry and plantation areas.

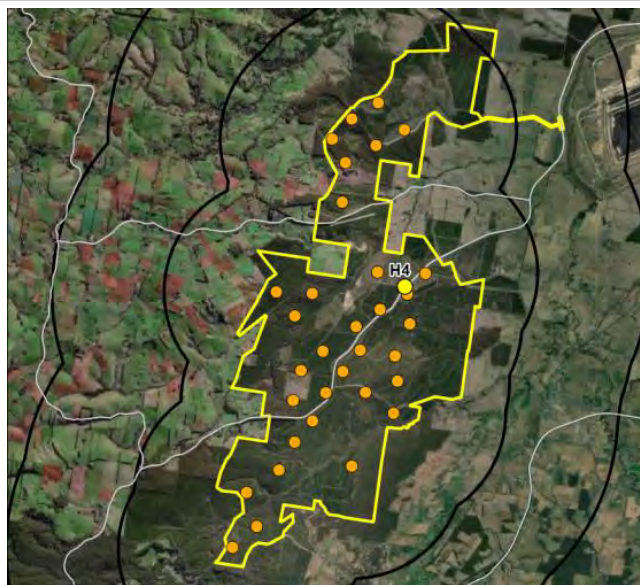


Figure 8-16: Viewpoint H4 – Existing view looking east

At a distance of 200m, the proposed turbines will be dominant elements when visible. Views from this location are through roadside vegetation and include the timber plantations within Landscape Unit 4b – Hills (plantation), a landscape that has a low-moderate sensitivity to visual change and one that changes regularly. Further, once the plantation establishes further this will assist to filter views to the turbines.

Although the turbine will be in close proximity to the road and seen by many people, views from this location would be fleeting and in transit only, with no roadside stops or pull-out bays where road users would pull over and take in views. Over time, these views would be filtered or completely screened. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT H4 – STRZELECKI HIGHWAY #4		
Distance	200m south-east (T15)	Will be visually dominant in the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	Low	

8.3.5 Viewpoint H5 – Strzelecki Highway #5

Viewpoint H5 is located on the Strzelecki Highway approximately 360 m south-west of its intersection with Ten Mile Creek Road.

The nearest turbine (T28) is approximately 1.8 km south-east.

Similar to the previous viewpoint, this view is taken where vegetation permits views over the landscape.

Virtual Reality imagery has also been prepared from this location, albeit the other side of the road.

Figure 8-17 shows the view looking south-east from the Strzelecki Highway.

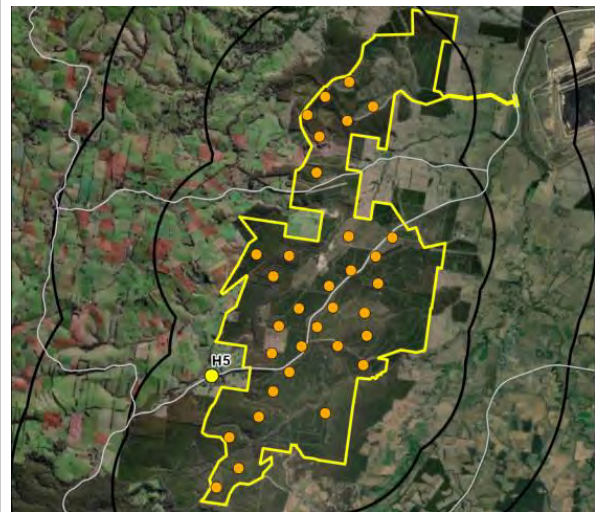


Figure 8-17: Viewpoint H5 – Existing view looking south-east

Figure 8-18 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.

As noted earlier in this report, the photomontage provides for a sense of scale and context in the view. Larger images included in the appendices of this report and in A0 size as well and the Virtual Reality Imagery should be used to consider the actual size and scale of the turbines in the view.



Figure 8-18: Viewpoint H5 – Photomontage Revised Layout (Layout 2.1)

Figure 8-19 shows an enlargement of the view focussing on the area of visible turbines.



Figure 8-19: Enlargement Viewpoint H5 – Photomontage Revised Layout (Layout 2.1)

Figure 8-20 shows a still capture from the virtual reality scene prepared by Ignition Immersive studios for use at the community consultation days undertaken in March 2020.



Figure 8-20 Strzelecki Highway Still Capture - Source Ignition Immersive Studios Strzelecki Highway Delburn

<https://vimeo.com/395878200> (Password: OSMI-IGNITION)

Existing vegetation to the left of Figure 8-17 will screen parts of the bases of the turbines. At approximately 1.2 km, the proposed turbines have the potential to be dominant features where gaps in vegetation permit views.

Although the turbines would be dominant, views would be short in duration and at speeds of approximately 100 km per hour.

For these reasons, the overall visual impact would be **Low - Moderate**.

VIEWPOINT H5 – STRZELECKI HIGHWAY #5		
Distance	1.8km south-east (T28)	Will always be visually dominant in the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW - MODERATE	

8.3.6 Viewpoint H6 – Strzelecki Highway #6

Viewpoint H6 is located on the Strzelecki Highway at the intersection of Peters Lane.

The nearest turbine (T33) is approximately 3.4 km east.

Figure 8-21 shows the view looking east from the Strzelecki Highway.

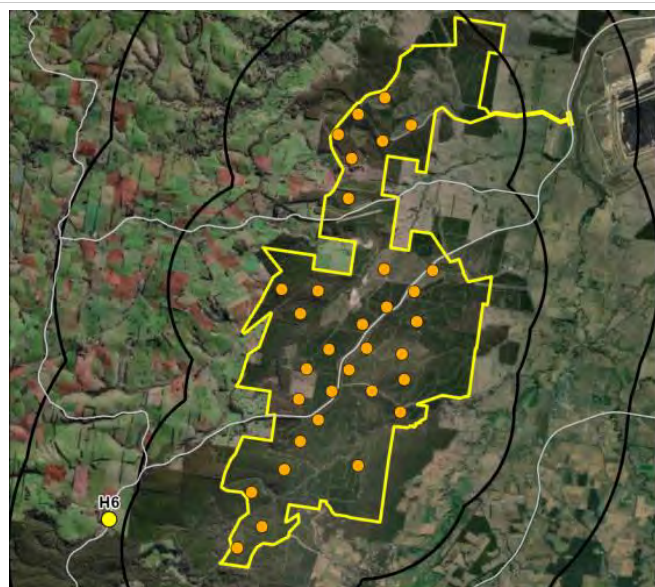


Figure 8-21: Viewpoint H6 – Existing view looking east

Viewpoint H6 is taken from a section of road, where vegetation within the roadside and nearby farming properties allows views towards the project. The proposed wind turbines would be located to the east extending through to the northeast with increasing distance.

The upper portions of the turbines directly to the east and northeast would be visible above vegetation to the left and centre of Figure 8-21. Turbines further to the north-east would be screened or filtered by topography and vegetation. Although the turbines would be highly visible and seen by many people, views would be short in duration and over a landscape that is not sensitive to visual change.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT H6 – STRZELECKI HIGHWAY #6		
Distance	3.4km east (T33)	Highly visible and will usually dominate in the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW	

8.3.7 Viewpoint H7 – Strzelecki Highway #7

Viewpoint H7 is located on the Strzelecki Highway approximately 240 m north of its intersection with Galvin's Road.

The nearest turbine (T33) is approximately 6.5 km northeast.

This is the northern entrance to Mirboo North and near to the Grand Ridge Rail Trail. Figure 8-22 shows the view looking northeast from the Strzelecki Highway.

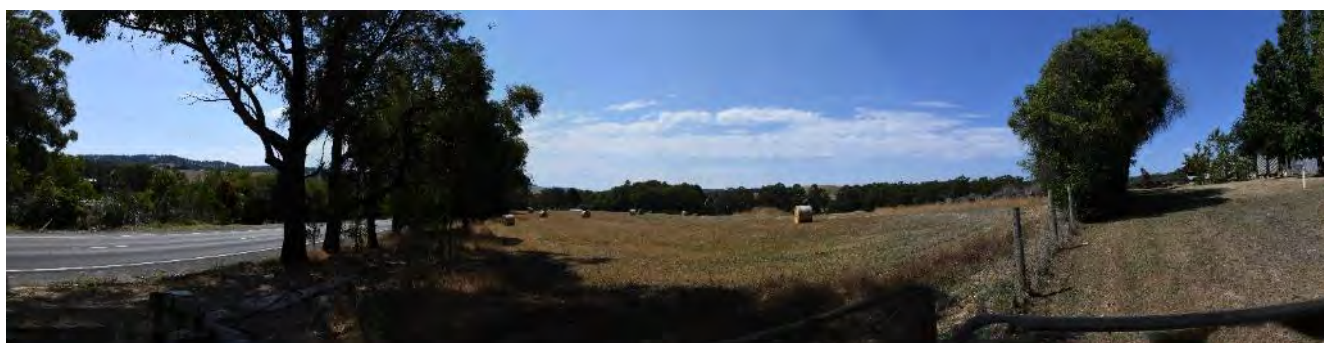
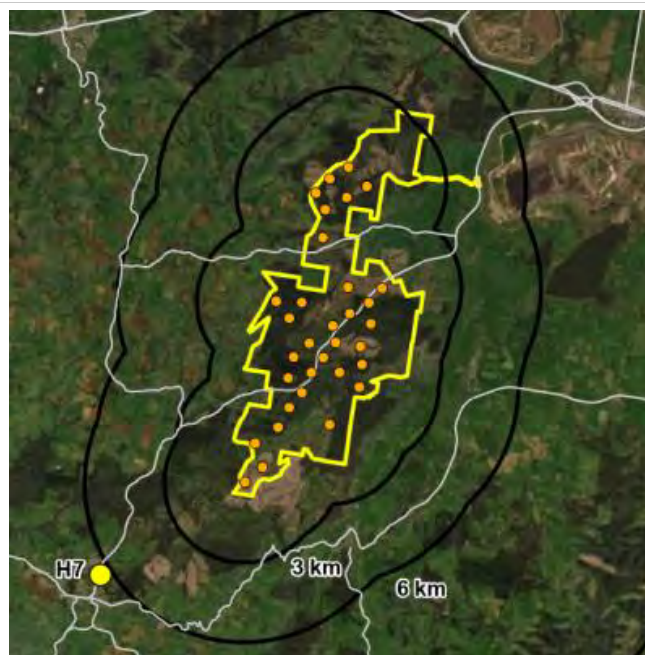


Figure 8-22: Viewpoint H7 – Existing view looking northeast

Viewpoint H7 is taken through a break in roadside vegetation over cleared farming land. The proposed turbines located at the southern extent of the Project may be visible above the vegetation seen in the background of the view. A combination of topography, existing vegetation and distance will screen turbines towards the centre and northern end of the Project. Views from the road would be filtered or screened by roadside vegetation seen to the left of Figure 8-22.

The landscape in this area, while interesting for the topography, vegetation and dynamic views, is not one that is sensitive to visual change. Due to filtered views, short duration of turbine visibility and low-moderate landscape sensitivity, the overall visual impact is considered to be **Low**.

VIEWPOINT H7 – STRZELECKI HIGHWAY #7		
Distance	6.5km northeast (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low-Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW	

8.3.8 Viewpoint H8 - Strzelecki Highway #8

Viewpoint H8 is located on the Strzelecki Highway approximately 320m north-west of the Wanke Road intersection on the outskirts of Mirboo North.

The nearest turbine (T33) is approximately 8.3km northeast.

Figure 8-23 shows the view looking northeast from the Strzelecki Highway.

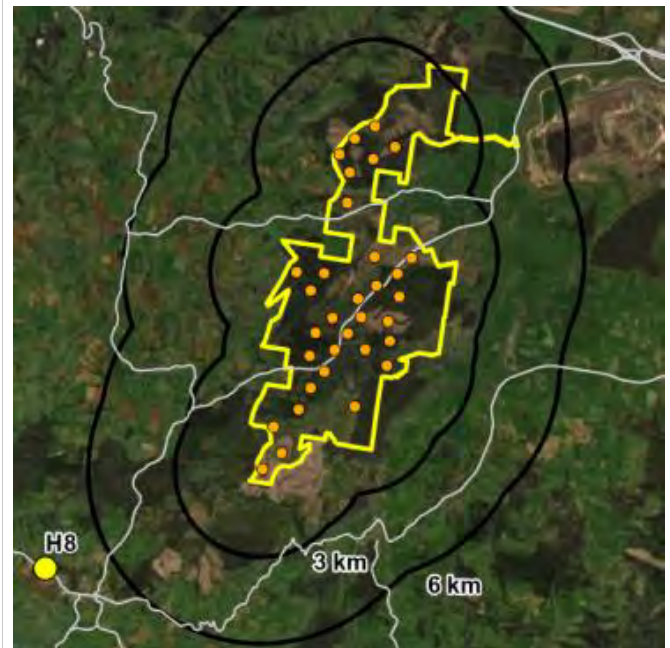


Figure 8-23: Viewpoint H8 – Existing view looking northeast

Viewpoint H8 is taken from a gap in roadside vegetation that allows views towards the Project. This view is taken from near the Mirboo North Garden Centre that sits within the rural residential area on Strzelecki Highway on the western fringe of Mirboo North township.

The turbines would be visible above the vegetation to the centre of Figure 8-23. At a distance of 8.3km the turbines have the potential to be noticeable, however, they would not be a dominant element in this view. This would be a fleeting view before entering the township of Mirboo North.

For these reasons, the overall visual impact would be **Low- Negligible**.

VIEWPOINT H8 – STRZELECKI HIGHWAY #8		
Distance	8.3km northeast (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1b – Rural Residential	Moderate
Viewer Numbers	Highway	Moderate-High
OVERALL VISUAL IMPACT	LOW - NEGLIGIBLE	

8.3.9 Viewpoint H9 - Grand Ridge Road #1

Viewpoint H9 is located on Grand Ridge Road approximately 1.1km north of the intersection with Leongatha-Yarragon Road.

The nearest turbine (T33) is approximately 18.9km east.

Grand Ridge Road is a local tourist route that runs south from 10km south of Warragul to Mirboo North and then heads southeast.

Figure 8-24 shows the view looking east from Grand Ridge Road.

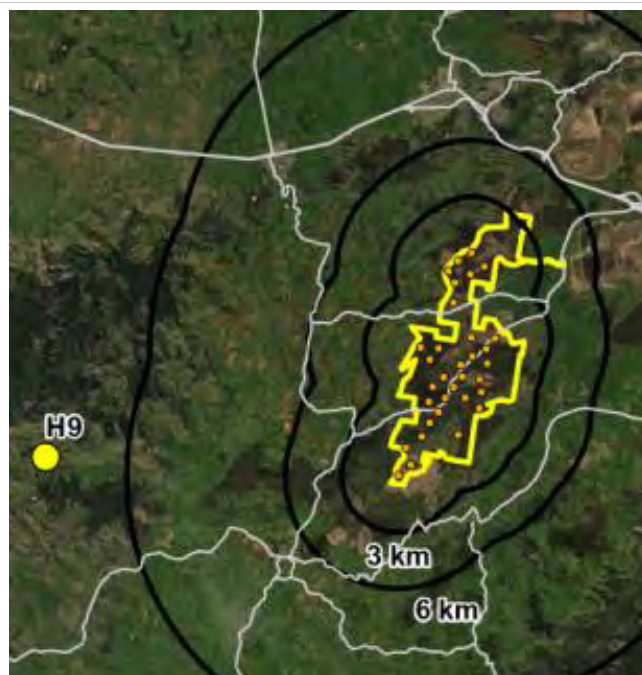


Figure 8-24: Viewpoint H9 – Existing view looking east

Viewpoint H9 is taken from a break in roadside vegetation where views are afforded towards the Project. Views are across rolling hills, incised valleys.

While this view is taken from a tourist route with moderate viewers and across rolling hills with a low-moderate level of sensitivity, at a distance of 18.9km the turbines may be discernible but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT H9 – GRAND RIDGE ROAD #1		
Distance	18.9km east (T33)	Discernible, but will not be dominant in views
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Tourist Route	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.3.10 Viewpoint H10 - Grand Ridge Road #2

Viewpoint H10 is located on Grand Ridge Road at the intersection with Forresters Road.

The nearest turbine (T33) is approximately 13.5km east.

Grand Ridge Road is a local tourist route that runs south from 10km south of Warragul to Mirboo North and then heads south-east.

Figure 8-25 shows the view looking east from Grand Ridge Road.

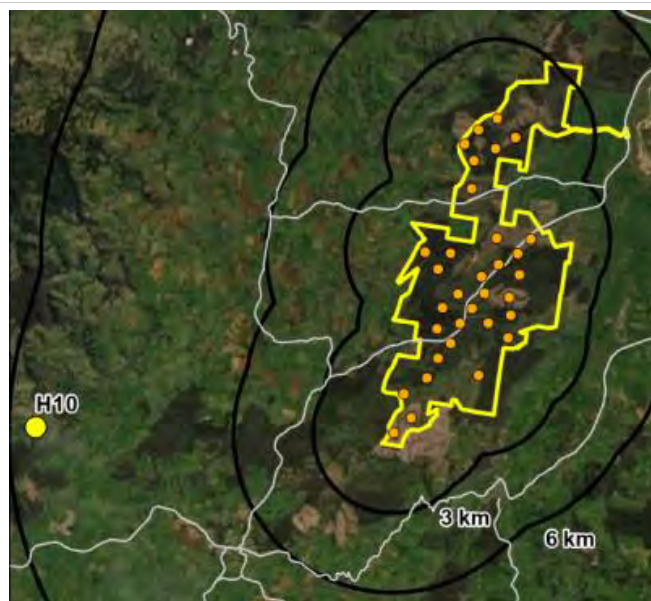


Figure 8-25: Viewpoint H10 – Existing view looking east

Topography and vegetation seen to the left of Figure 8-25 would filter or screen views to turbines.

While this view is taken from a tourist route with moderate viewers and across rolling hills with a low-moderate level of sensitivity, at a distance of 13.5km the turbines may be noticeable where gaps in roadside vegetation allow views but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT H10 – GRAND RIDGE ROAD #2		
Distance	13.5km east (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Tourist Route	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.3.11 Viewpoint H11 - Grand Ridge Road #3

Viewpoint H11 is located on Grand Ridge Road approximately 550m south of the intersection with Cooks Road.

The nearest turbine (T33) is approximately 12.8km east.

Grand Ridge Road is a local tourist route that runs south from 10km south of Warragul to Mirboo North and then heads south-east.

Figure 8-26 shows the view looking east from Grand Ridge Road.

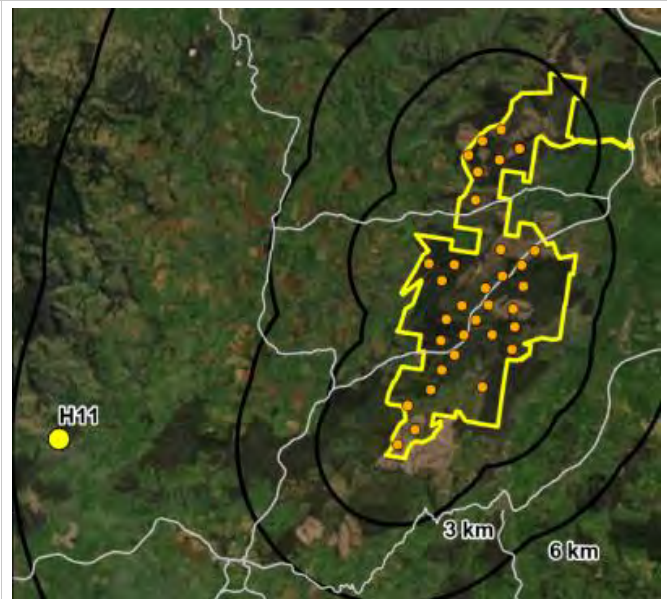


Figure 8-26: Viewpoint H11 – Existing view looking east

Viewpoint H11 is taken from a section of road where a small break in roadside vegetation potentially allows views towards parts of the Project.

There is the potential to see the nacelle and above of up to 8 turbines to the left of the vegetation seen in the centre of Figure 8-26. Where visible in gaps in vegetation and at a distance of 12.8km, turbines may be noticeable but would not be dominant features in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT H11 – GRAND RIDGE ROAD #3		
Distance	12.8km east (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Tourist Route	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.3.12 Summary of Highways and Tourist Routes Viewpoints

Table 8-4 summarises the overall visual impact from 11 locations from highways and tourist routes within the project viewshed.

Table 8-4 Summary of views from highways and tourist routes

VP	Location	Nearest Turbine Rev 3.4	Visual Impact
H1	Strzelecki Highway #1	7.1 km SW (T01)	Low-Negligible
H2	Strzelecki Highway #2	4.7 km SW (T01)	Low
H3	Strzelecki Highway #3	460 m SW (T16)	Low-Moderate
H4	Strzelecki Highway #4	200m SE (T15)	Low
H5	Strzelecki Highway #5	1.8 km SE (T28)	Low-Moderate
H6	Strzelecki Highway #6	3.4 km E (T33)	Low
H7	Strzelecki Highway #7	6.5 km NE (T33)	Low
H8	Strzelecki Highway #8	8.3km NE (T33)	Low-Negligible
H9	Grand Ridge Road #1	18.9km E (T33)	Negligible
H10	Grand Ridge Road #2	13.5km E (T33)	Negligible
H11	Grand Ridge Road #3	12.8km E (T33)	Negligible
OVERALL VISUAL IMPACT – HIGHWAYS/ TOURIST ROUTES			LOW

Overall, the visual impact of the Project in views from Tourist Routes and Highways will be assessed as **Low**. This is due to the majority of views towards the Project being limited by vegetation within roadsides, plantation areas and adjoining farming properties and screening afforded by nearby and surrounding topography. Views and visual impact would be further modified by the presence of other infrastructure which at times will be noticeable if not more dominant than the presence of the proposed wind turbines.

Highways and Tourist Routes within the viewshed include Grand Ridge Road a local tourist route that runs south from 10km south of Warragul to Mirboo North and then heads south-east and the Strzelecki Highway which runs through the middle of the Project. When travelling south, views along the Strzelecki Highway will be diverse and range from open clear views which include several turbines, to large sections encapsulated by roadside vegetation, with extensive timber plantations beyond.

Views from sections along the Strzelecki Highway towards the northern end of the Project will include turbines in long-range views also contain the elevated views of Mt Baw Baw and the national park to the north, high-voltage transmission lines and timber plantations. While these views may be currently available, timber in the adjoining plantation areas will filter and screen these views.

8.4 Major Roads

Major roads are frequently used by locals as they go about their daily lives in the area. Major roads include Monash Way to the east and the Morwell – Thorpdale Road which runs through the part of the northern end of the site.

Fifteen viewpoint locations (M1-M15) have been selected as representative of the view and landscape character types within the viewshed. Roads within this section are all classified as C-Class Roads, viewer numbers for these roads have been considered as medium/moderate. The landscape sensitivity varies and is dependent on the viewing location and landscapes in the area to the Project.

The location of each viewpoint in proximity to the Project is shown in Figure 8-27.

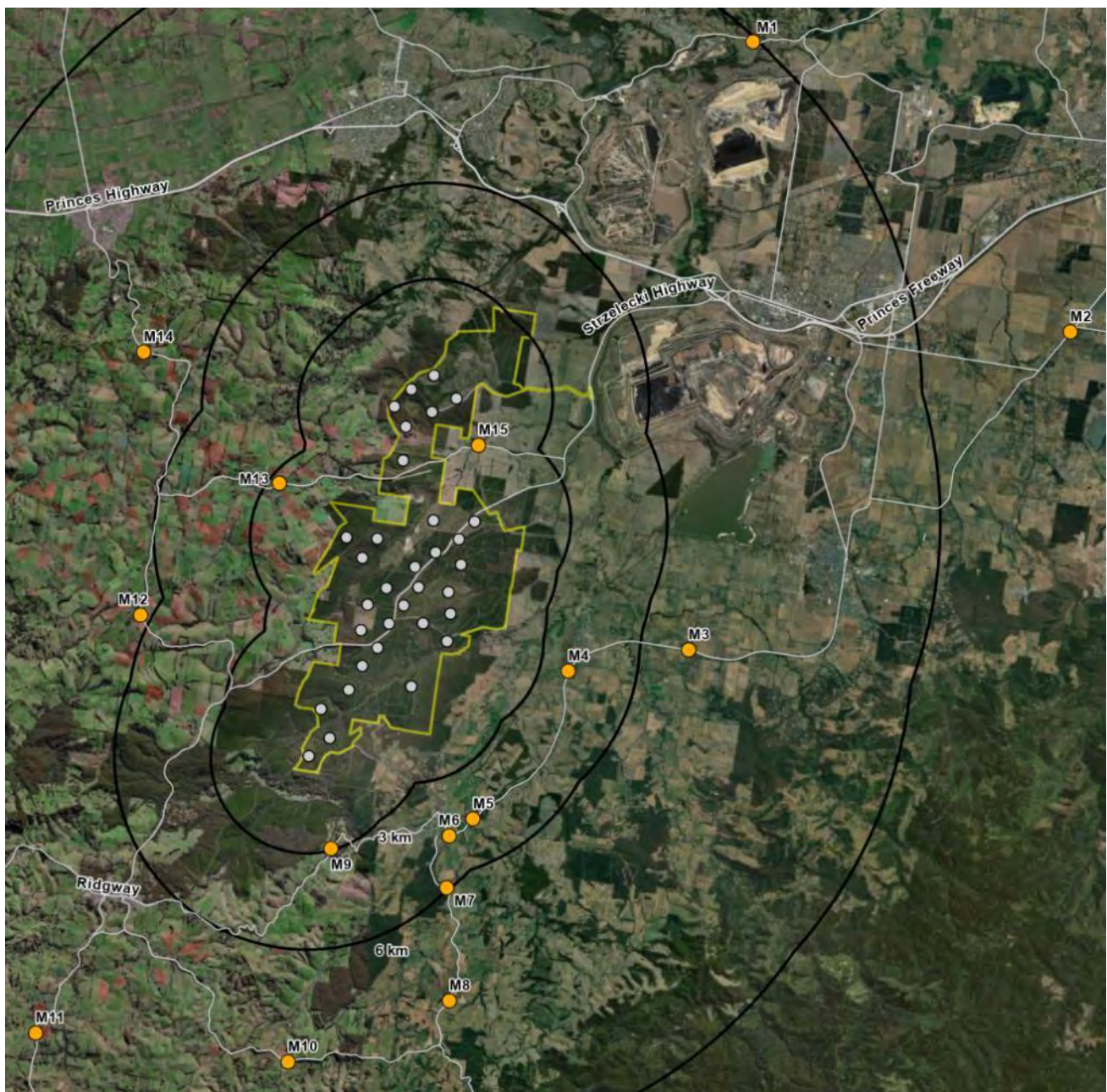


Figure 8-27: Major Roads Viewpoints

The viewpoint, GPS co-ordinates, distances to the nearest wind turbine and landscape unit in views towards the Project are described in Table 8-5.

Table 8-5: Major Roads Viewpoints

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
M1	Brown-Coalmine Road	55H 446457, 5775955	14.3km SW (T03)	Unit 3
M2	Hazelwood Road	55H 456342, 5766918	19.2 km SW (T01)	Unit 2a
M3	Monash Way	55H 444454, 5757011	7.4km W (T18)	Unit 2a
M4	Monash Way – Yinnar Road	55H 440705, 5756352	3.9km NW (T19)	Unit 2b
M5	Monash Way / Budgerree Road	55H 437738, 5751746	4.5km NW (T29)	Unit 2a
M6	Monash Way	55H 437001, 5751214	4.8km NW (T29)	Unit 2a
M7	Foster Road #1	55H 436921, 5749600	5.9km NW (T32)	Unit 4a
M8	Foster Road #2	55H 437002, 5746081	8.8km NW (T33)	Unit 2b
M9	Boolarra-Mirboo North Rd	55H 433371, 5750823	2.9km NW (T33)	Unit 4b
M10	Boolarra South – Mirboo North Rd	55H 431981, 5744177	9.4km N (T33)	Unit 2b
M11	Mardan Road	55H 424122, 5745075	12.1km NE (T33)	Unit 2b
M12	Mirboo North – Trafalgar Road	55H 427390, 3758097	6.2km SE (T31)	Unit 2b
M13	Morwell–Thorpdale Rd #1	55H 431712, 5762203	2.6 km SE (T24)	Unit 2b
M14	Trafalgar – Thorpdale Road	55H 427488, 5766289	8.0km E (T05)	Unit 2b
M15	Morwell – Thorpdale Road #2	55H 437909, 5763384	1.6km NW (T01)	Unit 2b

8.4.1 Viewpoint M1 – Brown-Coalmine Road

Viewpoint M1 is located on Brown-Coalmine Road approximately 325 m east of its intersection with Quarry Road.

The nearest turbine (T03) is approximately 14.3 km to the south-west.

Figure 8-28 shows the view looking south-west from Brown-Coalmine Road.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

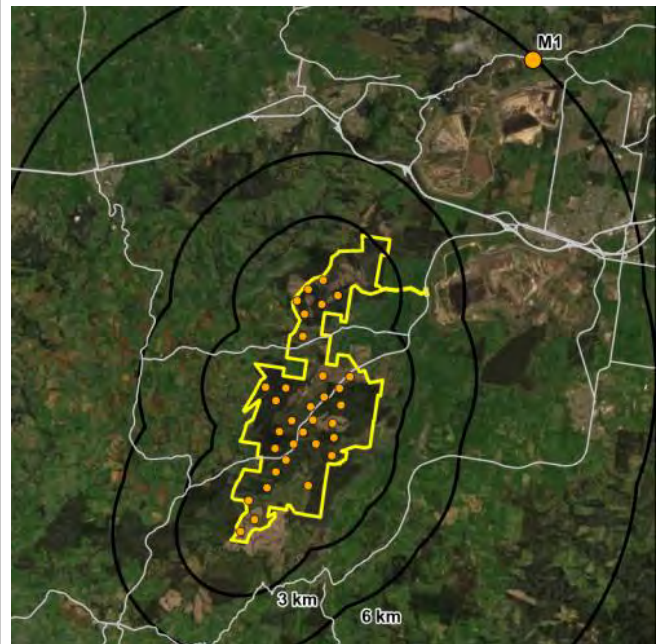


Figure 8-28: Viewpoint M1 – Existing view looking south-west

Views from this location are over Landscape Unit 3 – Industrial/Mining and include the Yallourn Open Cut Mine, Yallourn power station and other associated infrastructure.

At a distance of approximately 14.3 km, the turbines have the potential to be noticeable, but would not be visually dominant features.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT M1 – BROWN-COALMINE ROAD		
Distance	14.3km south-west (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.4.2 Viewpoint M2 – Hazelwood Road

Viewpoint M2 is located on Hazelwood Road approximately 200 m south of its intersection with Sanders Road.

The nearest turbine (T01) is approximately 19.2 km south-west.

Figure 8-29 shows the view looking south-west from Hazelwood Road.

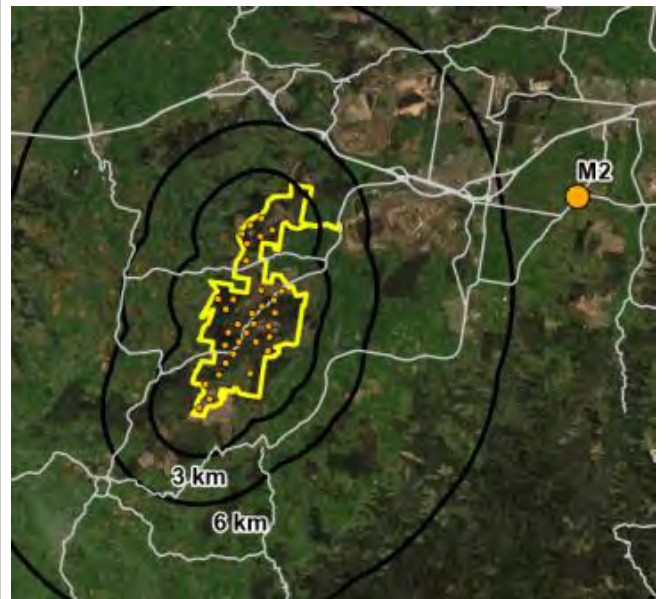


Figure 8-29: Viewpoint M2 – Existing view looking south-west

This view is taken from one of the few areas where a gap in the roadside vegetation would allow views towards the Project. Views from this location are over cleared farmland which is not a landscape that is recognised as being visually sensitive.

Further, at approximately 19.2 km and oblique to the direction of travel the turbines would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT M2 – HAZELWOOD ROAD		
Distance	19.2km south-west (T01)	Discernible, but will not be dominant in views
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.4.3 Viewpoint M3 – Monash Way

Viewpoint M3 is located on Monash Way approximately 80 m west of its intersection with Walshs Road.

The nearest turbine (T18) is approximately 7.4km west.

Figure 8-30 shows the view looking-south-west to north-west from Monash Way.

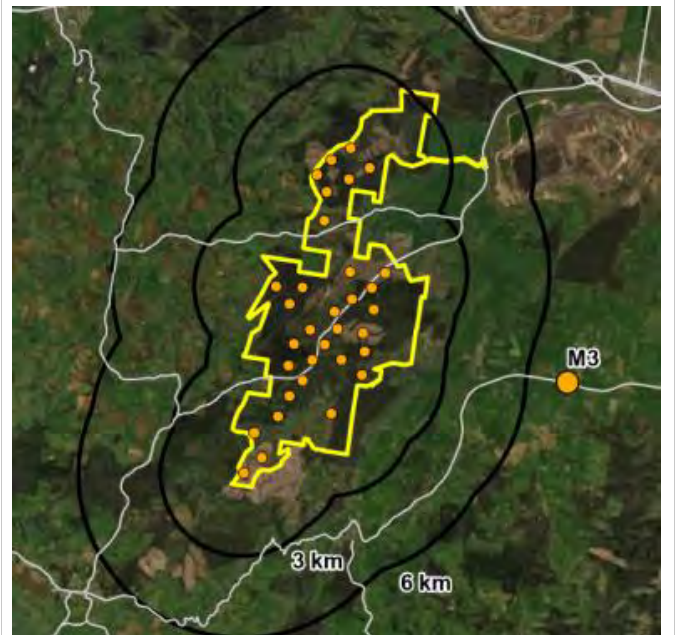


Figure 8-30: Viewpoint M3 – Existing view looking west

Existing views are over cleared flat farmland towards the elevated hills on which the Delburn Windfarm is proposed. In this view, the hills are generally low lying and provide a visual backdrop to the nearby farming land. Views towards the proposed wind farm include the existing transmission line within the southern edge of the road reserve which provide a reference of visual scale for the turbines.

At this distance, the proposed wind turbines will be highly noticeable due to their elevation and the silhouette on the horizon. Figure 8-31 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-31: Viewpoint M3 – Photomontage Revised Layout (Layout 2.1)

Figure 8-32 shows an enlargement of the view looking west along Monash Way.



Figure 8-32: Enlargement Viewpoint M3 – Photomontage Revised Layout (Layout 2.1)

The proposed wind turbines will be noticeable due to their position along the elevated hills in the background of the view, their silhouette on the horizon and limited vegetation along roadsides, property boundaries and fence lines. They would, however, be similar in size and scale to the existing transmission line that follows this section of Monash Way.

Although this view is one that would be seen by many people regularly and in the direct line of travel, the turbines would be noticeable but not dominant due to distance and visible over landscapes that are not sensitive to visual change. For these reasons, the overall visual impact is considered to be **Low- Moderate**

VIEWPOINT M3 – MONASH WAY		
Distance	7.4km west (T18)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.4.4 Viewpoint M4 – Monash Way – Yinnar Road Intersection

Viewpoint M4 is located at the intersection of Monash Way and Yinnar Road.

The nearest turbine (T19) is approximately 3.9km north-west.

Figure 8-33 shows the view looking west from the intersection of Monash Way and Yinnar Road.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

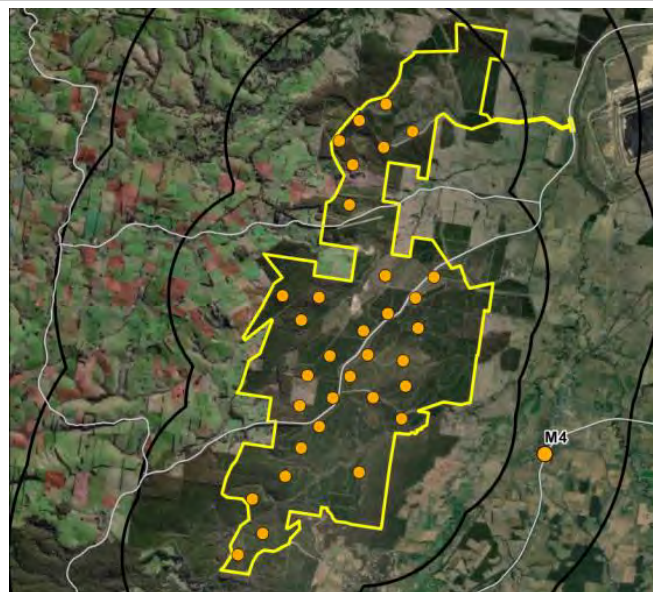


Figure 8-33: Viewpoint M4 – Existing view looking west

Viewpoint M4 is taken from a gap in roadside vegetation that will allow views through to the southern section of turbines. Turbines to the north of the Project will sit behind the vegetation seen to the right of Figure 8-33.

At a distance of 3.9km, the proposed turbines have the potential to be highly visible and dominate the landscape, where visible.

Views to the turbines from this location are perpendicular to the direction of travel and would be somewhat fleeting through breaks in roadside and other vegetation.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M4 – MONASH WAY – YINNAR ROAD INTERSECTION		
Distance	3.9km west (T19)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.5 Viewpoint M5 – Monash Way & Budgerie Road Intersection

Viewpoint M5 is located on Monash Way at the Budgerie Road intersection.

The nearest turbine (T29) is approximately 4.9km north-west.

Figure 8-34 shows the view looking north-west from Monash Way near the Budgerie Road intersection.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

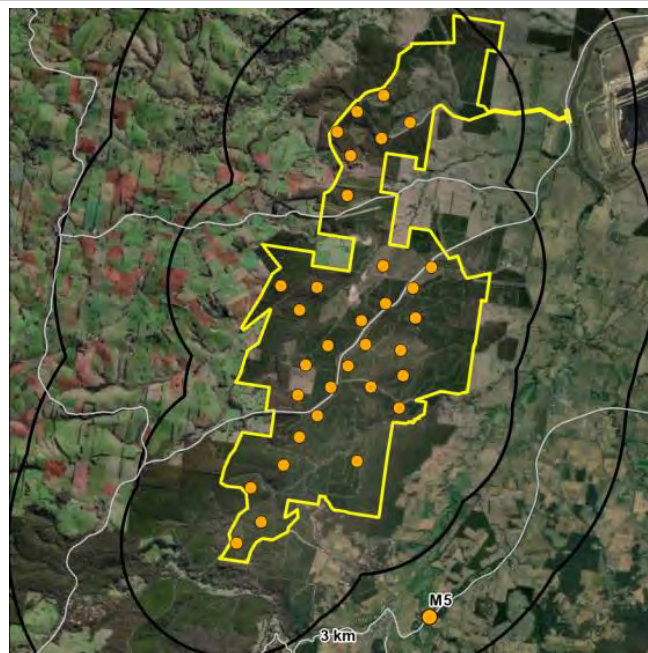


Figure 8-34: Viewpoint M5 – Existing view looking north-west

Views from this location are over cleared flat farmland which is a landscape that is recognised as being a low sensitivity to visual change. At a distance of 4.9km, the turbines have the potential to be a dominant element in the view where visible.

Vegetation and built form within the farm central to the view in Figure 8-34 will filter or screen the majority of the turbines from this location. It is recognised that the vegetation within the frontage of this farm is deciduous and will therefore lose their leaves through autumn and winter, however as seen in this view, the structure of the vegetation will still provide filtering of the slender profile of the turbines and their blades. In summer months, the turbines would be filtered or completely screened.

Due to distance and filtered or screened views, the overall visual impact would be **Low- Negligible**.

VIEWPOINT M5 – BUDGERIE ROAD		
Distance	4.9km north-west (T29)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW - NEGLIGIBLE	

8.4.6 Viewpoint M6 – Monash Way

Viewpoint M6 is located on Monash Way near the intersection of Morwell River Road. This viewpoint is near to the entry to Boolarra.

The nearest turbine (T29) is approximately 4.8 km north-west.

Virtual Reality imagery has also been prepared from this location.

Figure 8-35 shows the view looking north-west from Monash Way.

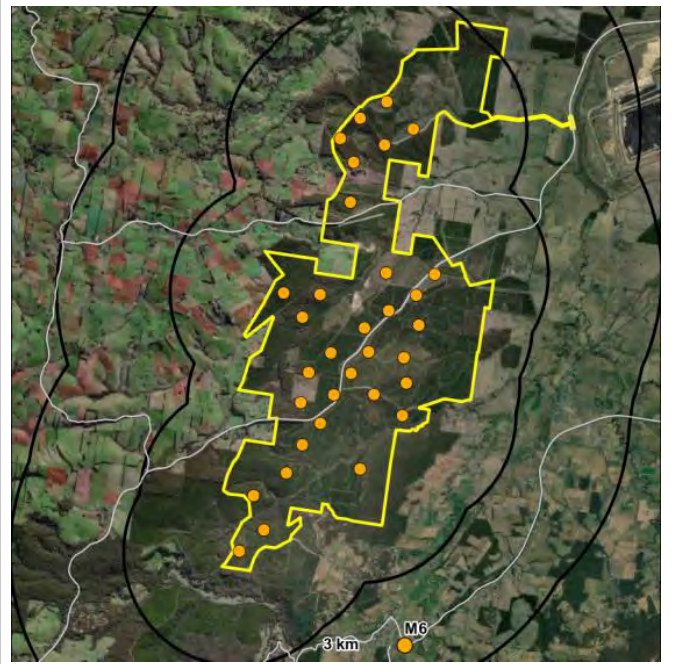


Figure 8-35: Viewpoint M6 – Existing view looking north-west

Figure 8-36 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-36: Viewpoint M6 – Photomontage Revised Layout (Layout 2.1)

Viewpoint M6 is taken from a section of road, where a gap in roadside vegetation allows for clear views towards part of the northern section of the Project. Visible turbines in this direction are at a distance of approximately 6.0 km or greater. The nearest wind turbines to the west north-west of Boolarra are screened by both topography and vegetation.

Visible turbines would be over Landscape Unit 2a - Cleared Flat Farmland and at a distance of approximately 6.0 km. It is clear from the photomontages, that although visible, the turbines would not be visually dominant features in these views.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M6 – MONASH WAY		
Distance	4.8km north-west (T29)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.7 Viewpoint M7 – Foster Road #1

Viewpoint M7 is located on Foster Road approximately 2.0km south-east of the intersection of Bastin Street.

The nearest turbine (T33) is approximately 5.9km north-west.

Figure 8-37 shows the existing view looking north from Foster Road.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

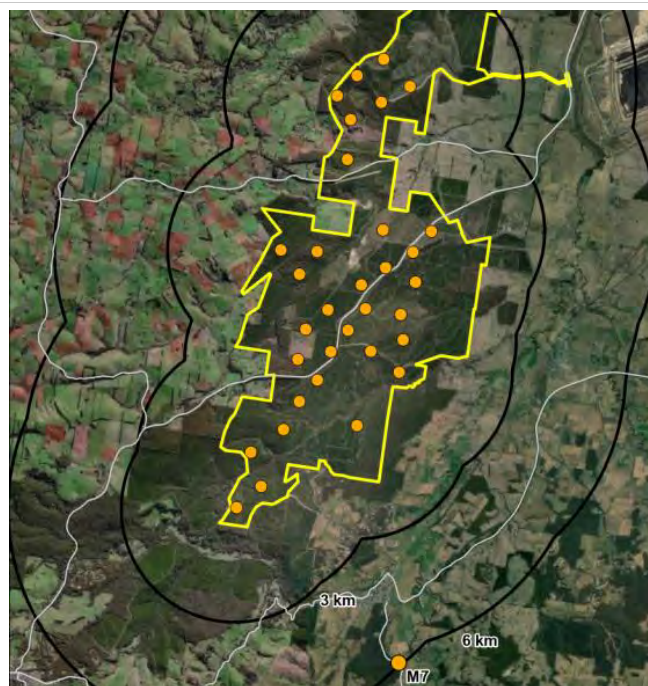


Figure 8-37: Viewpoint M7 – Existing view looking north

This view is taken from one of the few areas where a gap in the roadside vegetation would allow views towards the Project. Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

Further, this view is oblique to the direction of travel, short in duration and along a section of road with many twists and turns. At a distance of 5.9km the turbines have the potential to be visible but would not be a dominant element in the fleeting view. Existing roadside vegetation would also filter or screen most views towards the turbines. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M7 – FOSTER ROAD		
Distance	5.9km north-west (T33)	Highly visible and will usually dominate the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.8 Viewpoint M8 - Foster Road #2

Viewpoint M8 is located on Foster Road approximately 1.0km northeast of the intersection of Livingstone Road.

The nearest turbine (T33) is approximately 8.8km north-west.

Figure 8-38 shows the existing view looking north from Foster Road.

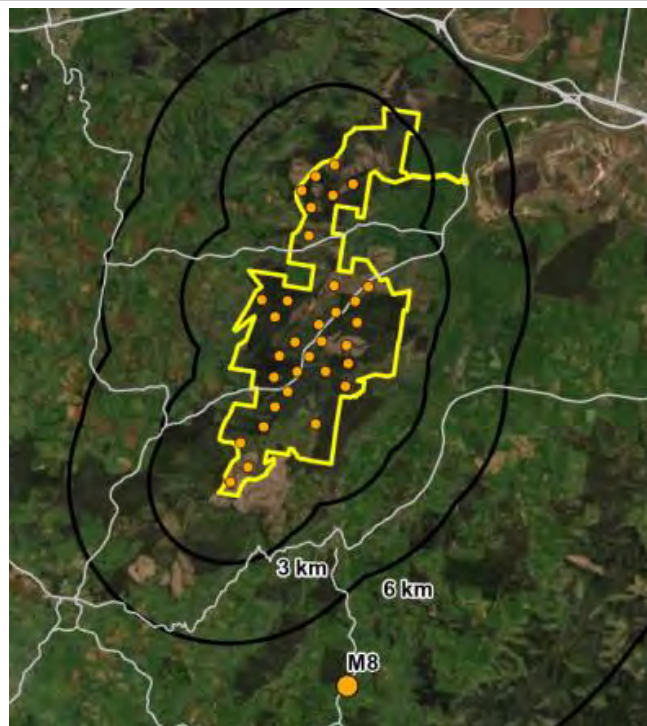


Figure 8-38: Viewpoint M8 – Existing view looking north

This view is taken from one of the few areas where a gap in the roadside vegetation would allow views towards the Project. Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

Further, this view is oblique to the direction of travel, at a distance of 8.8km the turbines have the potential to be noticeable but would not be a dominant element in the fleeting view.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M8 – FOSTER ROAD		
Distance	8.8km north-west (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.9 Viewpoint M9 - Boolarra – Mirboo North Road

Viewpoint M9 is located on Boolarra-Mirboo North Road.

The nearest turbine (T33) is approximately 2.9km north-west.

Figure 8-39 shows the view looking north from Boolarra-Mirboo North Road.

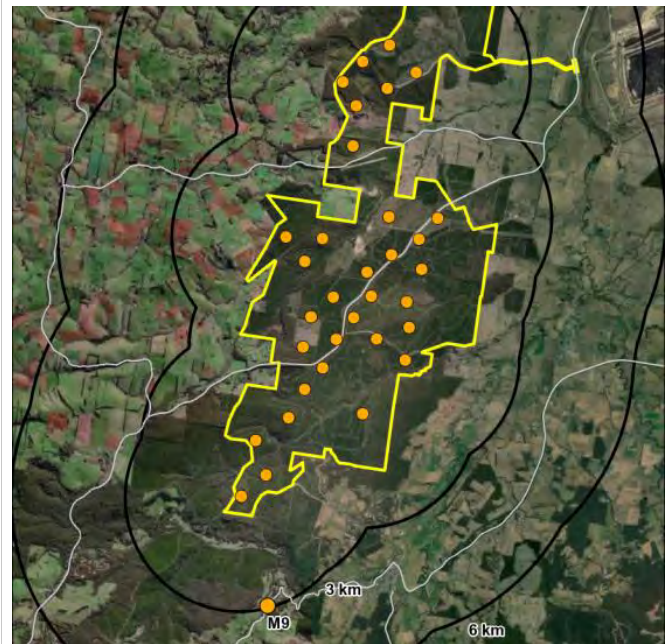


Figure 8-39: Viewpoint M9 – Existing view looking north

Viewpoint M9 is taken from a small section of Boolarra-Mirboo North Road where there is a gap in roadside vegetation and the road aligns to have a view to the southern end of the Project.

At a distance of 2.9km, the turbines have the potential to be a dominant element in the view where visible. However, this will be a fleeting view for the short section of road with no roadside vegetation.

For these reasons, the overall visual impact would be **Low - Moderate**.

VIEWPOINT M9 – BOOLARRA – MIRBOO NORTH ROAD		
Distance	2.9km north-west (T33)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Plantation)	Moderate-High
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW - MODERATE	

8.4.10 Viewpoint M10 – Boolarra South – Mirboo North Road

Viewpoint M10 is located on Boolarra South-Mirboo North Road approximately 380m south-east of Clear Creek Valley Road.

The nearest turbine (T33) is approximately 9.4km north.

Figure 8-40 shows the view looking north from Boolarra South – Mirboo North Road.

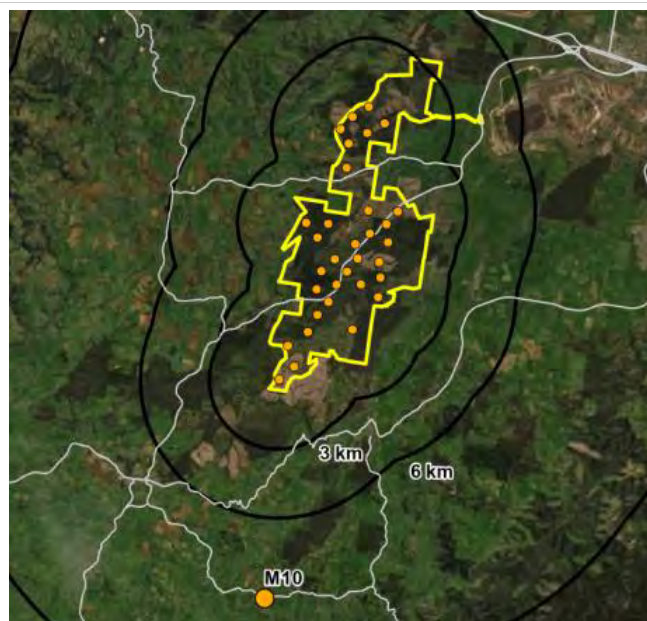


Figure 8-40: Viewpoint M10 – Existing view looking north

This view is taken from a gap in the roadside vegetation which would allow views towards the Project. Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

Further, this view is oblique to the direction of travel, and at a distance of 9.5km, a distance at which the turbines have the potential to be visible but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M10 – BOOLARRA SOUTH – MIRBOO NORTH ROAD		
Distance	9.4km north (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.11 Viewpoint M11 – Mardan Road

Viewpoint M11 is located on Mardan Road approximately 80m north of the Mindlay Road intersection.

The nearest turbine (T33) is approximately 12.1km northeast.

Figure 8-41 shows the view looking northeast from Mardan Road.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

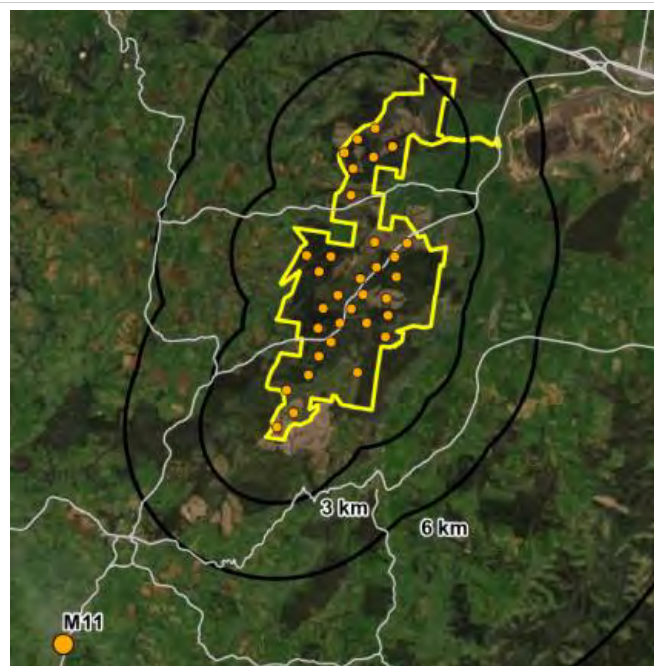


Figure 8-41: Viewpoint M11 – Existing view looking northeast

This view is taken from a location along Mardan Road where a gap in the roadside vegetation and the local topography would allow views towards the Project. Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

Further, this view is oblique to the direction of travel, at a distance of 12.2km the turbines have the potential to be visible but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT M11 – MARDAN ROAD		
Distance	12.2km northeast (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW	

8.4.12 Viewpoint M12 - Mirboo North – Trafalgar Road

Viewpoint M12 is located on Mirboo North – Trafalgar Road approximately 330m north-west of Walshs Road.

The nearest turbine (T31) is approximately 6.2km south-east.

Figure 8-42 shows the view looking east from Mirboo North-Trafalgar Road.

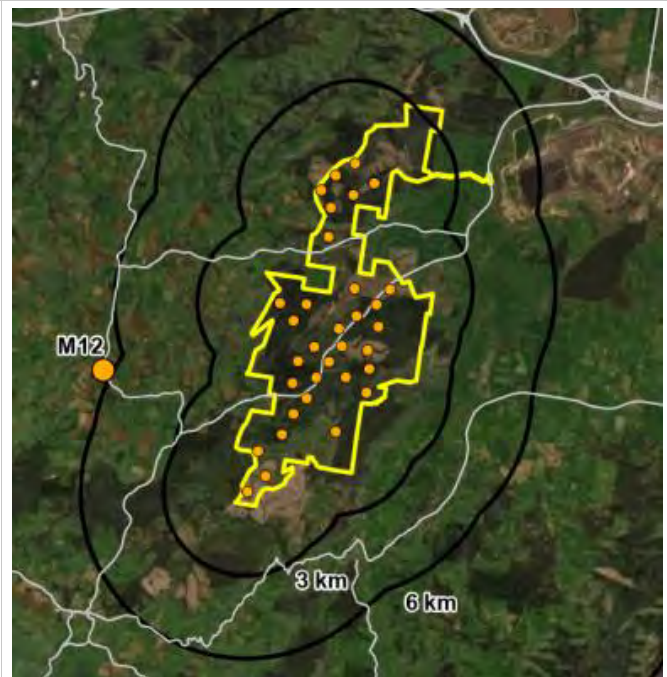


Figure 8-42: Viewpoint M12 – Existing view looking east

Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

Further, this view is oblique to the direction of travel, at a distance of 6.0km the turbines have the potential to be visible and would likely be a noticeable element in the view.

For these reasons, the overall visual impact would be **Low-Moderate**.

VIEWPOINT M12 – MIRBOO NORTH – TRAFALGAR ROAD		
Distance	6.2km south-east (T31)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.4.13 Viewpoint M13 – Morwell – Thorpdale Road #1

Viewpoint M13 is located on Morwell-Thorpdale Road at the intersection of McDonald's Track.

The nearest turbine (T24) is approximately 2.6 km south-east.

Figure 8-43 shows the view looking south-east from Morwell-Thorpdale Road at the intersection with McDonald's Track.

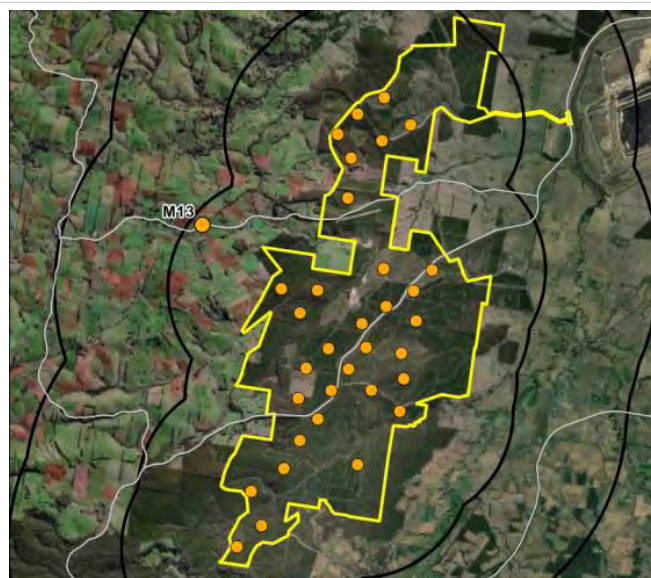


Figure 8-43: Viewpoint M13 – Existing view looking south-east

Turbines towards the northeast would be screened by native roadside vegetation and trees located along fence lines and property boundaries. Turbines to the south-east would be approximately 2.6 km and at a distance that when visible, through breaks in vegetation such that they would be a dominant element in that views albeit in scale and proportion consistent with this vegetation.

Views from this location would be somewhat fleeting and filtered by roadside vegetation. For these reasons, the overall visual impact would be **Low-Moderate**.

VIEWPOINT M13 – MORWELL-THORPDALE ROAD		
Distance	2.6km south-east (T24)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.4.14 Viewpoint M14 - Trafalgar – Thorpdale Road

Viewpoint M14 is located on Trafalgar-Thorpdale Road approximately 700m south-east of Trafalgar South Road.

The nearest turbine (T05) is approximately 8.0km east.

Figure 8-44 shows the view looking south-east from Trafalgar-Thorpdale Road.

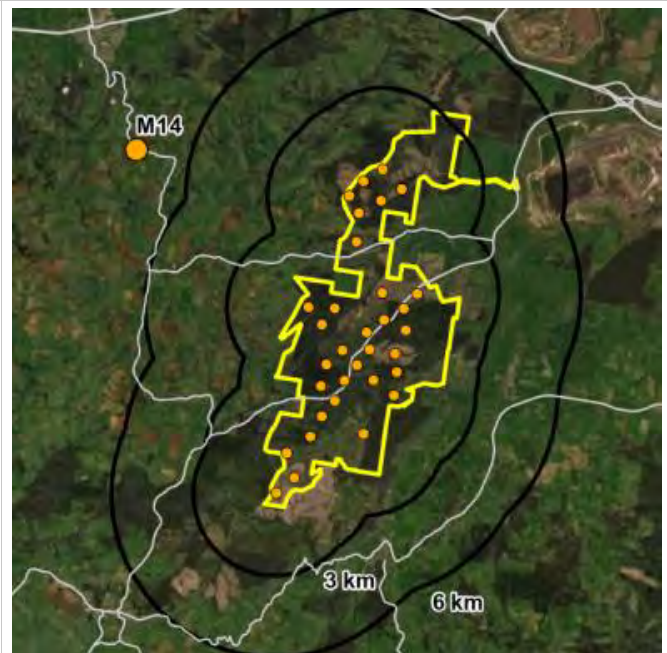


Figure 8-44: Viewpoint M14 – Existing view looking south-east

Viewpoint M14 has been taken from a section of road that aligns with a view through to the southern section of the Project. Views to the northern section of turbines would be filtered and screened by topography and the vegetation seen to the left of Figure 8-44.

At a distance of 8.0km turbines would be noticeable and have the potential to be a dominant element in the landscape. However, as shown in the earlier photomontage at viewpoint M3, the turbines would be visible, however, they would be at a visual scale that is similar to the nearby vegetation. For these reasons, the overall visual impact would be **Low-Moderate**.

VIEWPOINT M14 – TRAFALGAR-THORPDALE ROAD		
Distance	8.0km east (T05)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.4.15 Viewpoint M15 - Morwell – Thorpdale Road #2

Viewpoint M15 is located on Morwell-Thorpdale Road approximately 100m west of Holstons Road.

The nearest turbine (T01) is approximately 1.6km north-west.

Virtual Reality imagery has also been prepared from this location.

Figure 8-45 shows the view looking west from Morwell-Thorpdale Road.

This view is taken from a section of the Morwell Thorpdale road with the potential for clear open towards the northern end of the Project and just west of the location where it passes under a high voltage transmission line. Sections of the road to the west of this location become winding with steep cuttings and extensive roadside vegetation which screens and filters views.

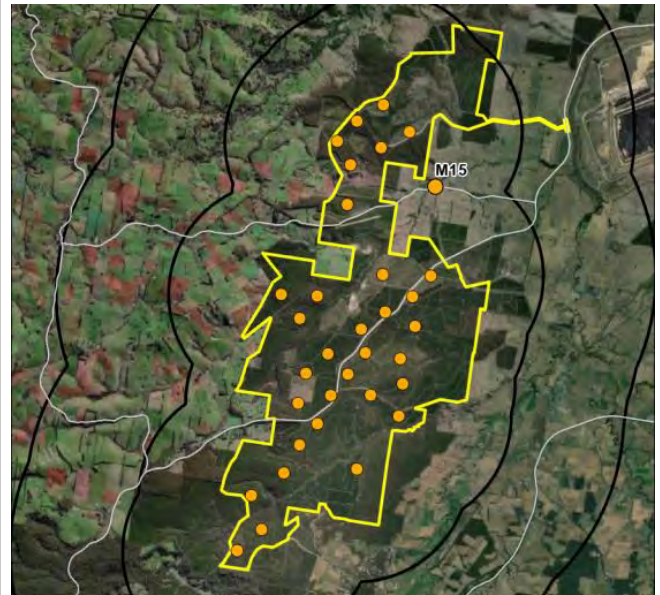


Figure 8-45: Viewpoint M15 – Existing view looking west

Figure 8-46 shows a still capture from the Virtual Reality imagery prepared for this location by Ignition Immersive Studios for use at the community consultation days undertaken in March 2020.

As mentioned above, not only does the virtual reality imagery animate the turbines, to provide scale and context against features in existing views, the imagery also captures vehicles moving along the road network, trees and vegetation moving in the breeze and sounds from the local area.



Figure 8-46 Morwell Thorpdale Road Still Capture - Source: Ignition Immersive Studios Virtual Reality Footage Morwell Thorpdale Road Driffield

<https://vimeo.com/395878079> (Password: OSMI-IGNITION)

At a distance of 1.6km the turbines have the potential to be a dominant element in the view. Turbine T07 would be located central to the view and above the road roughly central to the view seen in Figure 8-45 and at a distance of approximately 2.4km. Turbines in the northern section of the Project would be visible on the hill to the right. Turbines in the central and southern areas of the Project would be screened by topography and vegetation.

From this location, the overall visual impact would be **Moderate**. This is due to the turbines being nearby, with the potential for clear and open views. Morwell-Thorpdale Road is not a high traffic road and the views are over landscapes that or a low to moderate sensitivity to visual change.

VIEWPOINT M15 – MORWELL-THORPDALE ROAD		
Distance	1.6km north-west (T01)	Will always be visually dominant in the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	MODERATE	

8.4.16 Summary of Major Roads Viewpoints

Table 8-6 summarises the 15 viewing locations selected from major roads within the project viewshed, the distance to the nearest turbine and the overall visual impact for each location.

Table 8-6 Summary of views from Major Roads

VP	Location	Nearest Turbine	Visual Impact
Rev 3.4			
M1	Brown-Coalmine Road	14.3km SW (T03)	Low-Negligible
M2	Hazelwood Road	19.2 km SW (T01)	Negligible
M3	Monash Way	7.4km W (T18)	Low-Moderate
M4	Monash Way – Yinnar Road	3.9km NW (T19)	Low
M5	Monash Way / Budgerree Rd	4.5km NW (T29)	Low-Negligible
M6	Monash Way	4.8km NW (T29)	Low
M7	Foster Road #1	5.9km NW (T32)	Low
M8	Foster Road #2	8.8km NW (T33)	Low
M9	Boolarra-Mirboo North Rd	2.9km NW (T33)	Low-Moderate
M10	Boolarra South – Mirboo North Rd	9.4km N (T33)	Low
M11	Mardan Road	12.1km NE (T33)	Low
M12	Mirboo North – Trafalgar Road	6.2km SE (T31)	Low-Moderate
M13	Morwell–Thorpdale Rd #1	2.6 km SE (T24)	Low-Moderate
M14	Trafalgar – Thorpdale Road	8.0km E (T05)	Low-Moderate
M15	Morwell – Thorpdale Road #2	1.6km NW (T01)	Moderate
OVERALL VISUAL IMPACT – MAJOR ROADS			LOW-MODERATE

Overall, the visual impact of the Project in views from major roads would be assessed as **Low-Moderate**. This is due to the majority of views towards the Project being limited by vegetation within roadsides, plantation areas and adjoining farming properties and screening afforded by nearby and surrounding topography.

Major roads include Hazelwood Road and Monash Way to the east and the Morwell – Thorpdale Road which runs through the part of the northern end of the site. Major roads are frequently used by locals as they go about their daily lives in the area and have a moderate number of road users.

Major roads throughout the viewshed vary from open clear views towards the Project to folding undulating topography that open and close to views towards the Project. Views in Section 8.4 have highlighted the ability for vegetation to filter and screen views to the Project from major roads within the area.

8.5 Local Roads

Twenty-four viewpoint locations (L1-L24) have been selected as representative of view that are likely to be afforded from local roads within the viewshed. Viewer numbers are considered to be low while the landscape sensitivity would vary dependant on the location of the viewpoint.

The location of each viewpoint location is shown in Figure 8-47.

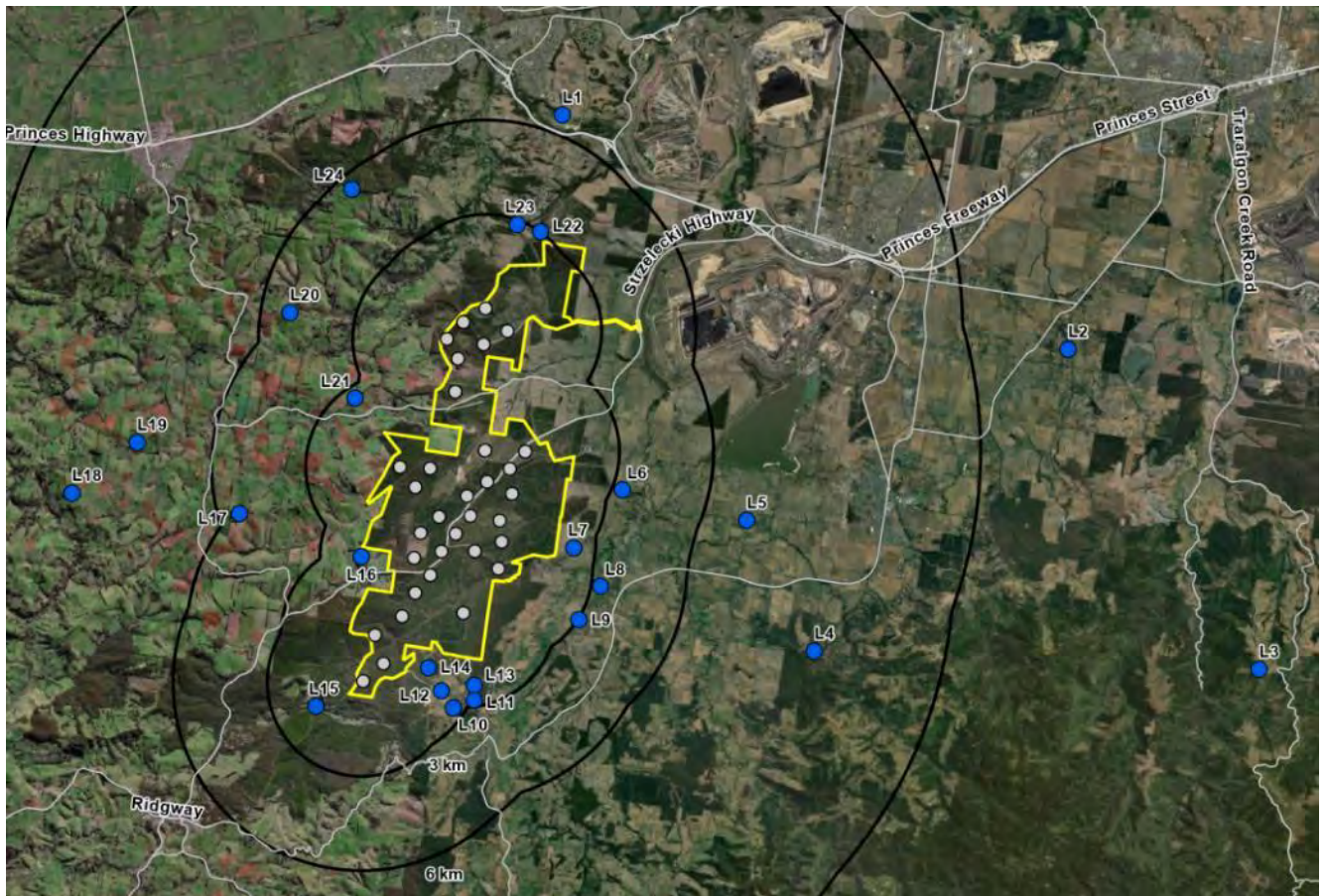


Figure 8-47: Local Roads

The viewpoint location, corresponding GPS co-ordinates, distances to the nearest wind turbine and landscape sensitivities are listed in Table 8-7.

Table 8-7: Local Roads

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
L1	Haunted Hills Road	55H 438973, 5771721	6.5km SW (T03)	Unit 2b
L2	Jeeralang North Road	55H 455073, 5764263	17.6km W (T16)	Unit 1b
L3	Red Hill Road	55H 461160, 5754080	24.4km NW (T19)	Unit 4b
L4	Jumbuk Road	55H 446997, 5754660	10.4km NW (T19)	Unit 2b
L5	Hazelwood Estate/Walshs Rd	55H 444842, 5758819	7.3km NW (T16)	Unit 2a
L6	Yinnar-Driffield Road	55H 440550, 5762032	2.9km SW (T16)	Unit 2a
L7	Creamery Road	55H 439336, 5757942	2.3km W (T18)	Unit 4b
L8	Vaggs Road	55H 440187, 5756723	3.2km W (T29)	Unit 2a
L9	Nuttalls Road	55H 439398, 5755660	2.9km NW (T19)	Unit 2a
L10	Bunderra Drive	55H 435501, 5752853	2.6km NW (T32)	Unit 1b
L11	Darlimurla Road #1	55H 436164, 5753103	2.7km NW (T29)	Unit 1b
L12	Darlimurla Road #2	55H 435118, 5753395	2.0km NW (T32)	Unit 1b
L13	McIntosh's Road	55H 436164, 5753578	2.3km NW (T29)	Unit 4a
L14	Todds Road	55H 434710, 5754128	1.4km W (T32)	Unit 4b
L15	Darlimurla Road #3	55H 431126, 5752903	1.7km NE (T33)	Unit 4a
L16	Ten Mile Creek Road	55H 432569, 5757667	1.6km E (T21)	Unit 2b
L17	McDonalds Track #1	55H 428688, 5759035	5.3km NE (T24)	Unit 2b
L18	McDonalds Track #2	55H 423357, 5759689	10.4km NE (T24)	Unit 2b
L19	Childers-Thorpdale Road	55H 425432, 5761301	8.4km E (T24)	Unit 2b
L20	Narracan Connection Road	55H 430294, 5765432	5.0km E (T05)	Unit 2b
L21	McDonalds Track #3	55H 432370, 5762710	2.6km SE (T24)	Unit 2b
L22	Sayers Track	55H 438274, 5768007	3.0km SW (T03)	Unit 3
L23	McDonalds Track	55H 437538, 5768230	2.8km SW (T03)	Unit 4a
L24	Moe South Road	55H 432269, 5769356	5.4km SE (T04)	Unit 2b

8.5.1 Viewpoint L1 – Haunted Hills Road

Viewpoint L1 is located on Haunted Hills Road approximately 500 m east of its intersection with Ghost Way. Haunted Hills Road is a local road to the north of the Princes Freeway and east of Moe.

The nearest turbine (T03) is approximately 6.5 km south-west.

Figure 8-48 shows the view looking south through a break in roadside vegetation.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

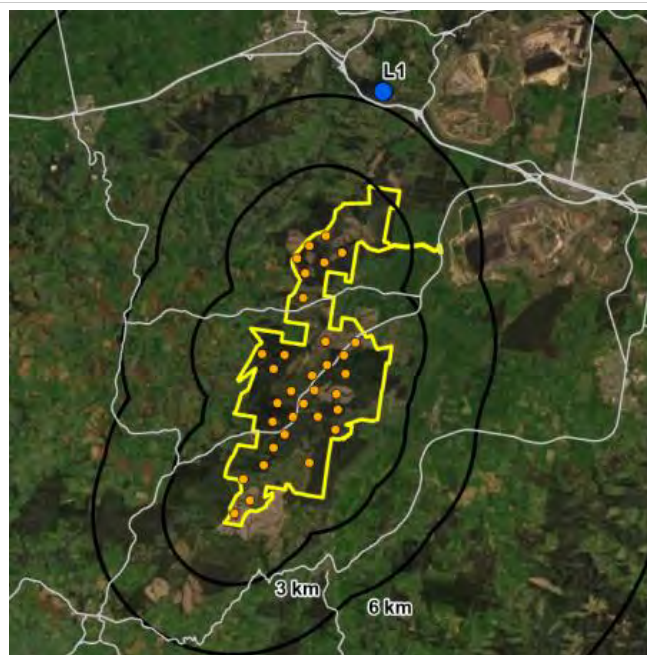


Figure 8-48: Viewpoint L1 – Existing view looking south-west from behind existing roadside vegetation

The tips and upper sections of several turbines located in the northern section of the wind farm would be visible above the hills seen in the background of the view.

Views from this location will be oblique to the direction of travel and largely screened or filtered by nearby roadside vegetation.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT L1 – HAUNTED HILLS ROAD		
Distance	6.5km south-west (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.5.1 Viewpoint L2 – Jeeralang North Road

Viewpoint L2 is located on Jeeralang North Road approximately 240 m south of its intersection with Arrandoon Drive.

The nearest turbine (T16) is approximately 17.6 km west.

Figure 8-49 shows the view looking west along Jeeralang North Road.

This view is from a location where theoretical turbine visibility was demonstrated in the SAA described in Section 7 of this report.

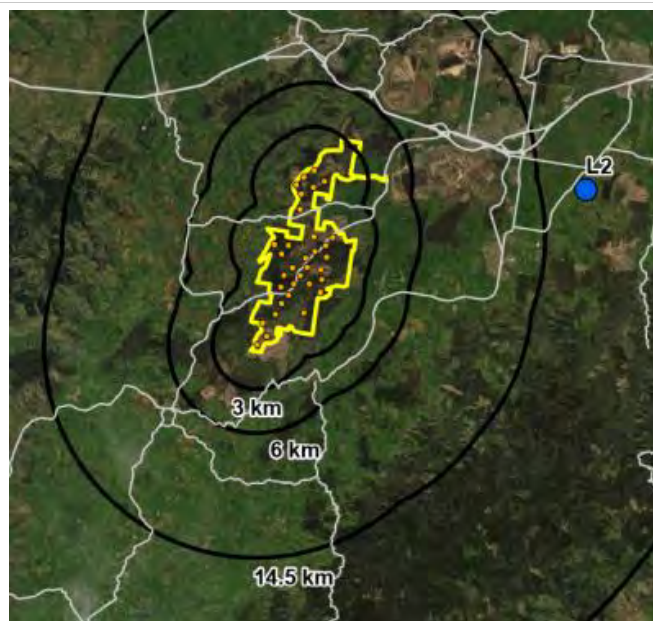


Figure 8-49: Viewpoint L2 – Existing view looking west

Jeeralang North Road is a local road, only used by residents of this rural residential community.

Existing vegetation within the road reserve and property boundaries will filter views towards the Project. At a distance of approximately 17.6 km, the proposed turbines may be noticeable where visible, but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT L2 – JEERALANG NORTH ROAD		
Distance	17.6km west (T16)	Discernible, but will not be dominant in views
Landscape Unit	LU1b – Rural Residential	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.5.2 Viewpoint L3 – Red Hill Road

Viewpoint L3 is located on Red Hill Road approximately 650m north-west of Traralgon Balook Road.

The nearest turbine (T19) is approximately 24.4km north-west.

Figure 8-50 shows the view looking north-west from Red Hill Road.

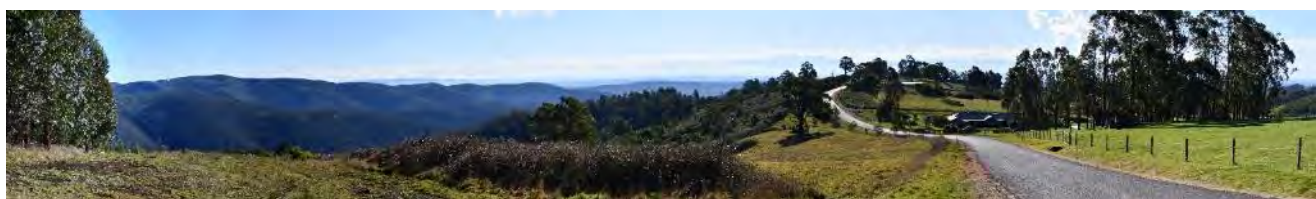
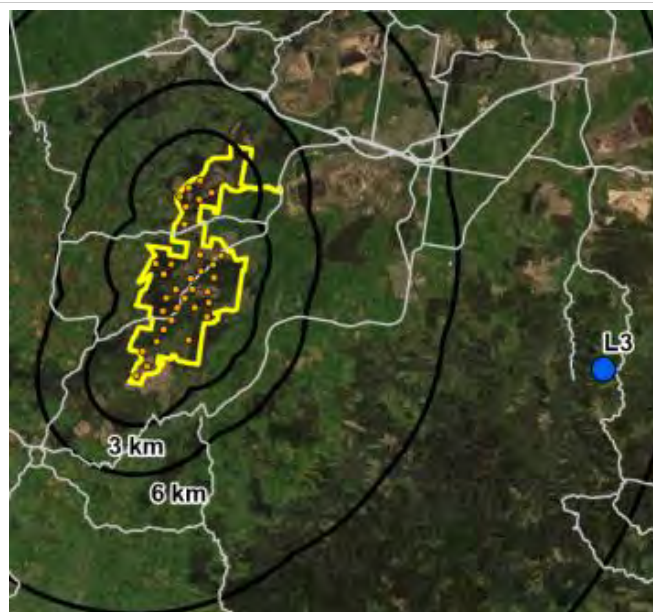


Figure 8-50: Viewpoint L3 – Existing view looking north-west

Viewpoint L3 is taken from a section of road where a gap in roadside vegetation and topography allows views towards the Project. While this view is across a landscape with a moderate to high sensitivity to change at a distance of 24.4km the turbines may be discernible but would not be a dominant element in views.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT L3 – RED HILL ROAD		
Distance	24.4km north-west (T19)	Discernible, but will not be dominant in views
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.5.3 Viewpoint L4 - Jumbuk Road

Viewpoint L4 is located on Jumbuk Road approximately 350m east of Kerry Road.

The nearest turbine (T19) is approximately 10.4km north-west.

Figure 8-51 shows the view looking north-west from Jumbuk Road.

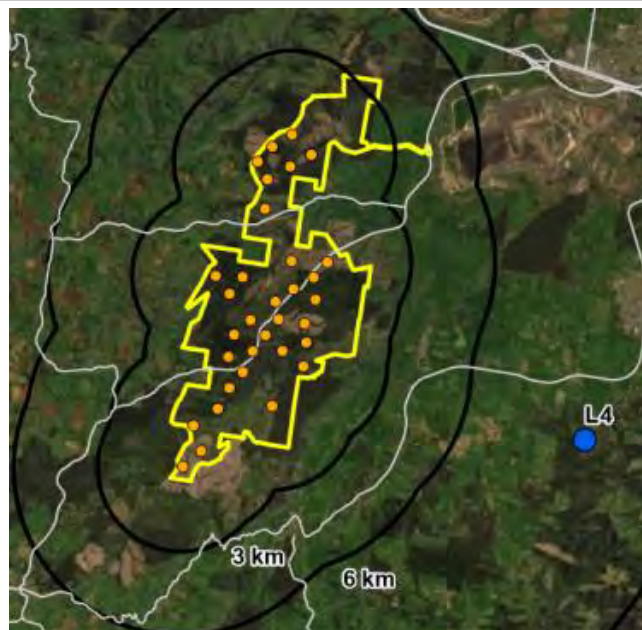


Figure 8-51: Viewpoint L4 – Existing view looking north-west

Viewpoint L4 is taken from a section of Jumbuk Road where topography and limited roadside vegetation in the direction of the turbines allows for fleeting albeit narrow views towards the southern end of the Project. Views from this location are over cleared hilly farmland which is a landscape that is recognised as being a low to moderate sensitivity to visual change.

At a distance of 10.4km the turbines have the potential to be visible but would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT L4 – JUMBUK ROAD		
Distance	10.4km north-west (T19)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.5.4 Viewpoint L5 - Corner Hazelwood Estate – Walshs Road

Viewpoint L5 is located at the intersection of Hazelwood Estate and Walshs Roads.

The nearest turbine (T16) is approximately 7.3km north-west.

Figure 8-52 shows the view looking west from the intersection of Hazelwood Estate Road and Walshs Road.

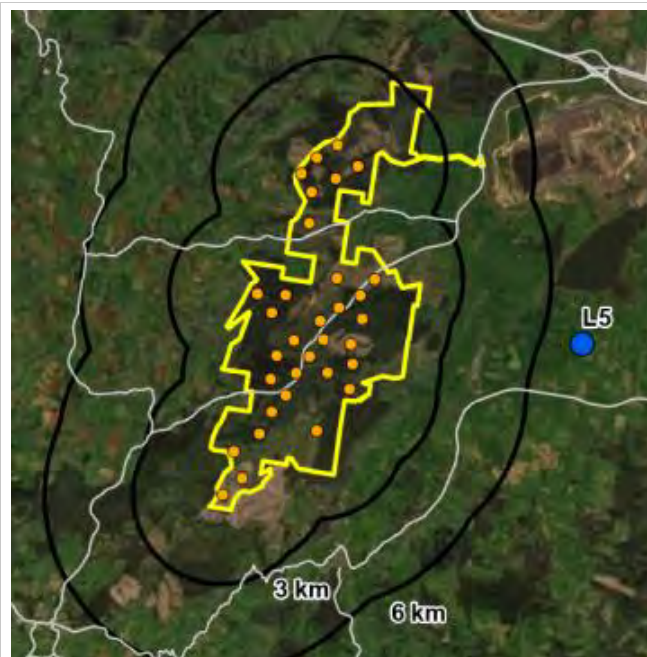


Figure 8-52: Viewpoint L5 – Existing view looking west

Hazelwood Estate Road is located on the flat plains to the northeast of the Project. Limited roadside vegetation will allow clear views to the Project and the turbines visible on the ridgeline in the background of the view. The former Hazelwood open cut mine, cooling ponds and existing high voltage transmission lines are visible to the north of this location and the right Figure 8-52. The proposed turbines would be visible on the elevated hills seen in the background of the view and would be similar in distance and orientation to the photomontage included at viewpoint M3 above.

View towards the project are over a landscape that is highly modified and not sensitive to visual change. At a distance of approximately 7.3km the turbines have the potential to be noticeable, however, seen by few people.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L5 – CORNER HAZELWOOD ESTATE – WALSHS ROAD		
Distance	7.3km north-west (T16)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.5 Viewpoint L6 – Yinnar-Driffield Road

Viewpoint L6 is located on Yinnar-Driffield Road approximately 550 m south of its intersection with the Strzelecki Highway.

The nearest turbine (T16) is approximately 2.9 km south-west.

Figure 8-53 shows the view looking west from Yinnar Driffield Road through a break in roadside vegetation and over cleared farmland.

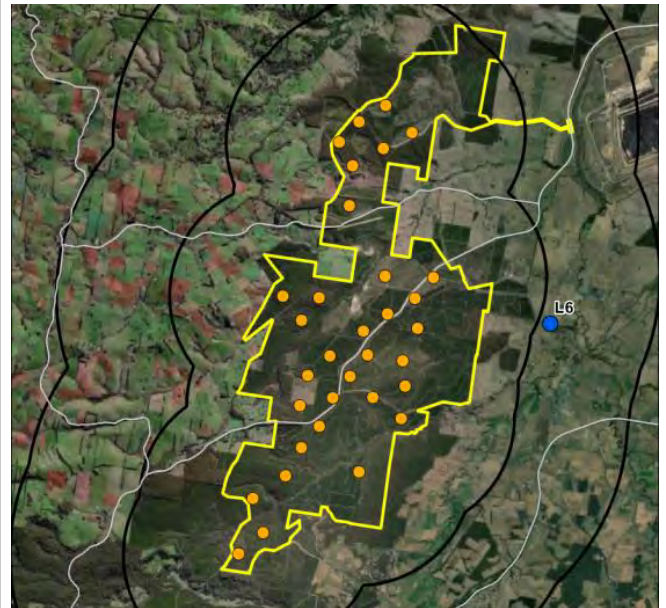


Figure 8-53: Viewpoint L6 – Existing view looking west

At a distance of approximately 2.0km, the wind turbines will be a dominant element in the view. Views from this location are over Landscape Unit 2a – Cleared Flat Farmland, which has a low sensitivity to visual change and with few road users taking in this particular view.

Due to the relatively few viewers who would take in this view and the low sensitivity of the landscape in the view towards the proposed turbines, the overall visual impact would be **Low**.

VIEWPOINT L6 – YINNAR-DRIFFIELD ROAD		
Distance	2.9km south-west (T16)	Will always be visually dominant in the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.6 Viewpoint L7 – Creamery Road

Viewpoint L7 is located on Creamery Road.

The nearest turbine (T18) is approximately 2.3 km west.

Photomontages have been prepared from this location as there are clear views and to demonstrate views from the east of the Project.

Figure 8-54 shows the existing view looking north-west from Creamery Road.

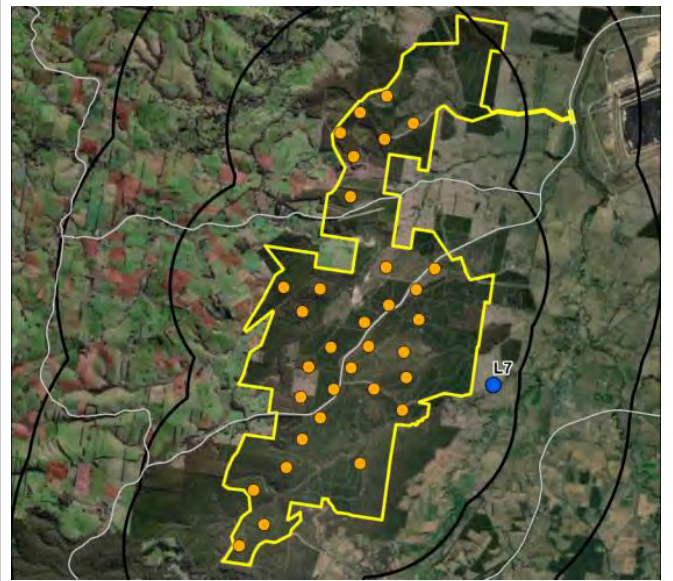


Figure 8-54: Viewpoint L7 – Existing view looking north-west

Figure 8-55 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-55: Viewpoint L7 – Photomontage Revised Layout (Layout 2.1)

Figure 8-56 shows an enlargement of this photomontage looking directly west.



Figure 8-56: Enlargement Viewpoint L7 – Photomontage Revised Layout (Layout 2.1)

The photomontage shows that at a distance of approximately 2.3 km the turbines will be visually dominant where clear views are permitted. These photomontages also demonstrate the effectiveness of turbine placement in moderating turbine visibility and visual impact from sensitive viewing locations and the effectiveness of vegetation at screening views of 250 m high turbines.

The vegetation including the small nearby shrub roughly central to the views and larger trees in the distance to the left of these comparative images also demonstrate role and effectiveness of landscape mitigation and screening views from sensitive locations (e.g. residential dwellings). Although a local road, Creamery Road provides the shortest route between Yinnar and Thorpdale through the HVP plantations areas and is well used. Views from Creamery Road include the nearby open farmland, HVP plantations and views over the Morwell River Valley towards Yinnar and away from the proposed turbines. For these reasons, the overall visual impact would be **Low-Moderate**.

VIEWPOINT L7 – CREAMERY ROAD		
Distance	2.3km west (T18)	Will always be visually dominant in the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.5.7 Viewpoint L8 - Vaggs Road

Viewpoint L8 is located on Vaggs Road approximately 575m west of the intersection with Yinnar Road.

The nearest turbine (T19) is approximately 3.2km west.

Figure 8-57 shows the existing view looking east along Vaggs Road.

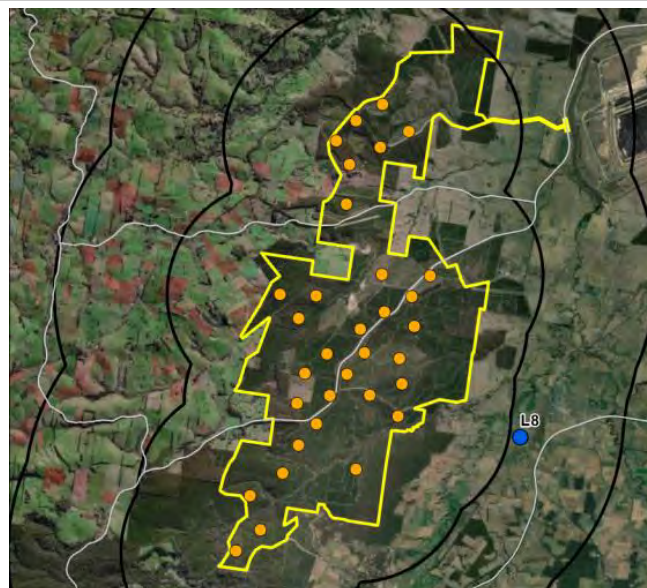


Figure 8-57: Viewpoint L8 – Existing view looking east

Viewpoint L8 is taken from the section of Vaggs Road with limited roadside vegetation. Locations further to the west and closer to the proposed turbines include many large old trees which will filter views of the turbines and can be seen roughly central to this view. Limited roadside vegetation and flat topography at this location would allow clear views to the majority of the wind farm.

While there will be a clear view towards the majority of the wind farm, views are over Landscape Unit 2a which is recognised as having a low sensitivity to change and will have a low number of road users. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L8 – VAGGS ROAD		
Distance	3.2km west (T19)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.8 Viewpoint L9 – Nuttalls Road

Viewpoint L9 is located on Nuttalls Road at the intersection with Riverside Drive. Nuttalls Road is truncated to the south of this location and closed to through traffic. Riverside Drive turns to the north and joins Vaggs Roads.

The nearest turbine (T19) is approximately 2.9km north-west.

Figure 8-58 shows the view looking west from the intersection of Nuttalls Road and Riverside Drive.

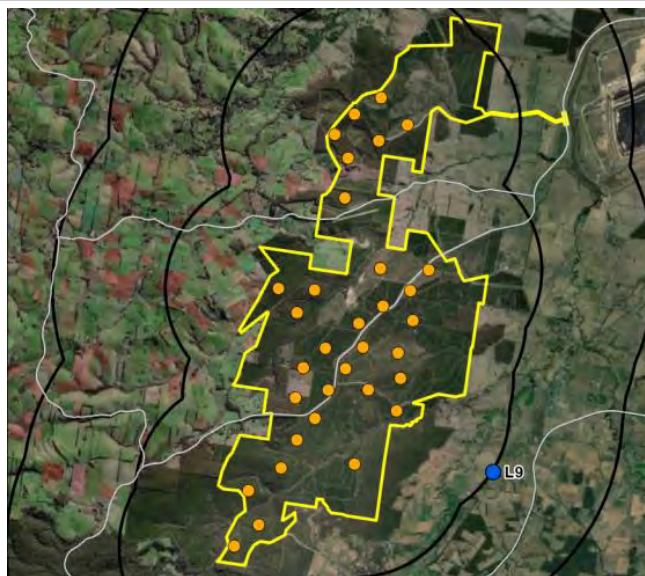


Figure 8-58: Viewpoint L9 – Existing view looking west

Viewpoint L9 is taken from the section of Nuttalls Road that aligns with the centre of the wind farm before the road bends and heads south. Limited roadside vegetation and flat topography allow clear views to the majority of the wind farm. Turbines in the northern section will be filtered by the vegetation shown to the right of Figure 8-58.

While there will be a clear view towards the majority of the wind farm, views are over Landscape Unit 2a which is recognised as having a low sensitivity to change. Being a closed road to the south, and link to Vaggs to the north there are few, albeit regular road users who will take in this view. Due to the low landscape sensitivity and overall limited number of people who will take in this view the overall visual impact would be **Low**.

VIEWPOINT L9 – NUTTALLS ROAD		
Distance	2.9km north-west (T03)	Will always be visually dominant in the landscape
Landscape Unit	LU2a – Cleared Flat Farmland	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.9 Viewpoint L10 – Bunderra Drive

Viewpoint L10 is located on Bunderra Drive approximately 350 m south of its intersection with Darlimurla Road.

The nearest turbine (T32) is approximately 2.6 km north-west.

Figure 8-59 shows the view looking west from Bunderra Drive where a break in roadside vegetation allows for views to the Project.

Photomontages have been prepared due to the clear views from the roadway and to assist with views and visual impact associated with the layout changes.

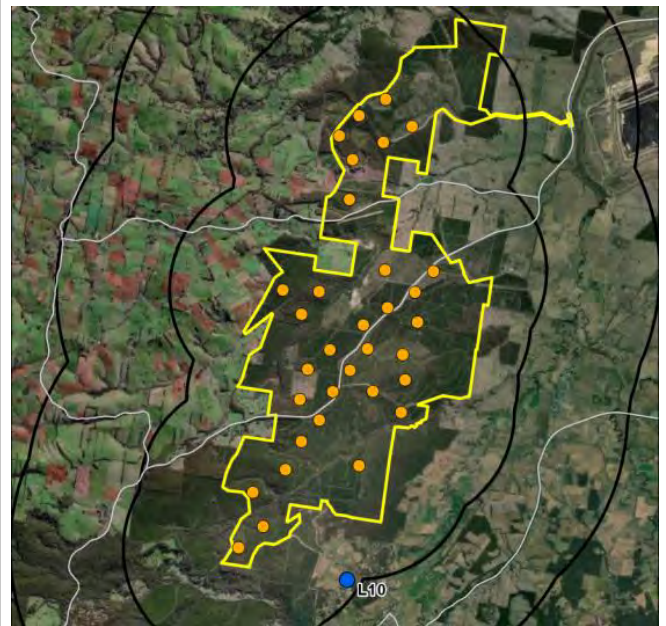


Figure 8-59: Viewpoint L11 – Existing view looking west

Extensive roadside vegetation and in areas to the north and south of this location will filter and screen views from many locations along Bunderra Road. Examples of this vegetation can be seen in the images above and below.

Figure 8-60 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-60: Viewpoint L11 – Photomontage Revised Layout

Figure 8-61 shows an enlargement of this view.



Figure 8-61: Enlargement Viewpoint L11 – Photomontage Revised Layout

Figure 8-59 is taken from a section of Bunderra Drive where a gap in vegetation allows clear views towards the Project. At a distance of approximately 2.6 km, the turbines may dominate the view.

From the roadway, these views will be short in duration due to the extent of roadside vegetation and until such a time that the recently planted trees take up this vegetation break. Where visible, the overall visual impact from Bunderra Road would be **Low**. This impact is for road users and visitors to the area and not the same as views and visual impact from residential dwellings.

VIEWPOINT L10 – BUNDERRA DRIVE		
Distance	2.6km north-west (T32)	Will always be visually dominant in the landscape
Landscape Unit	LU1b – Rural Residential	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.1 Viewpoint L11 – Darlimurla Road #1

Viewpoint L11 is located on Darlimurla Road approximately 500 m east its intersection with Bunderra Drive.

The nearest turbine (T29) is approximately 2.7 km north.

Figure 8-63 shows the view looking west from Darlimurla Road.

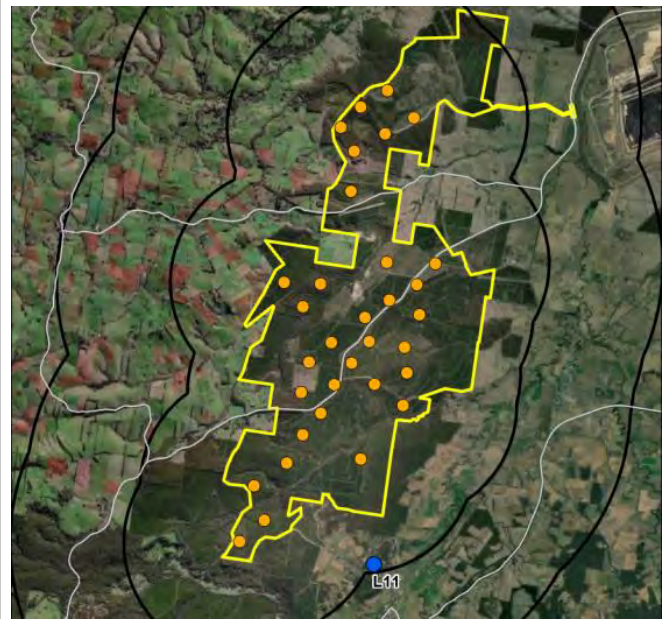


Figure 8-62: Viewpoint L11 – Existing view looking west

Existing vegetation will filter the majority of views along this section of Darlimurla Road. Turbines may be visible where breaks in vegetation and fences allow for views beyond the road reserve. The height and scale of the turbines in the context of the existing vegetation would not be of significance.

For these reasons, the visual impact is assessed as **Low-Negligible**.

VIEWPOINT L11 – DARLIMURLA ROAD #1		
Distance	2.7km north (T29)	Will always be visually dominant in the landscape
Landscape Unit	LU1b – Rural Residential	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.5.2 Viewpoint L12 – Darlimurla Road #2

Viewpoint L12 is located on Darlimurla Road approximately 620m north-west of the Bunderra Drive intersection.

The nearest turbine (T32) is approximately 2.0 km north-west.

Virtual Reality imagery has also been prepared from this location.

Figure 8-63 shows the view looking north-west along Darlimurla Road.

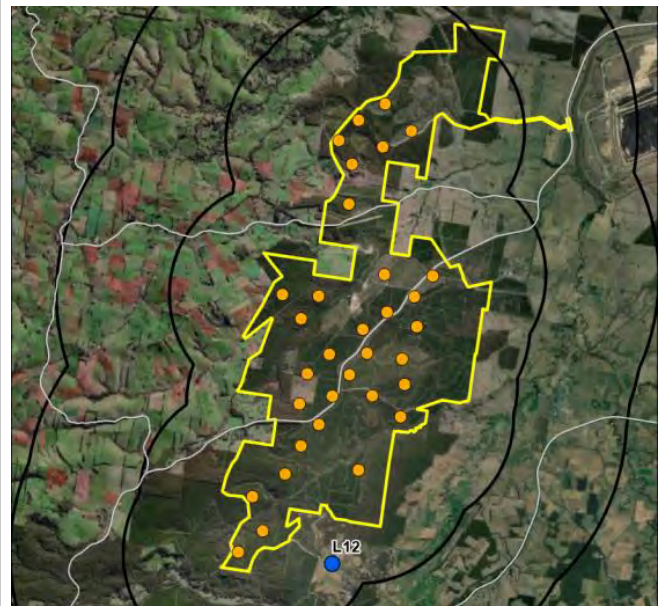


Figure 8-63: Viewpoint L12 – Existing view looking north-west

The view shown in Figure 8-64 is a still capture of the Virtual Reality imagery prepared by Ignition Immersive Studios from this location. The Virtual Reality imagery not only animates the turbines in the view, the footage also provides soundscapes from the location and captures the movement of vegetation, vehicles and elements from each location providing useful context that cannot be captured or presented in still images and photomontages.



Figure 8-64 Darlimurla Road Still Capture - Source Ignition Immersive Virtual Reality Footage Darlimurla Road

<https://vimeo.com/395877048> (Password: OSMI-IGNITION)

Existing vegetation will filter the majority of views along this section of Darlimurla Road. Turbines will be visible to the left of road and along the roadway for a short section when heading west. The upper section of turbines towards the centre of the wind farm would also be visible above the tree line in background of the view through breaks in roadside vegetation. The scene taken from the virtual reality imagery shown in Figure 8-64 shows that the height and scale of the turbines in the context of the existing vegetation would not be of significance.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT L12 – DARLIMURLA ROAD #2		
Distance	2.0km north (T32)	Will always be visually dominant in the landscape
Landscape Unit	LU1b – Rural Residential	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.5.3 Viewpoint L13 – McIntosh’s Road

Viewpoint L13 is located on McIntosh’s Road approximately 600 m east its intersection with Heists Road.

The nearest turbine (T29) is approximately 2.3 km north-west.

McIntosh’s Road is a local road that runs between Boolarra and the Strzelecki Highway through the elevated HVP timber plantation areas.

Figure 8-63 shows the view looking north-west from McIntosh’s Road.

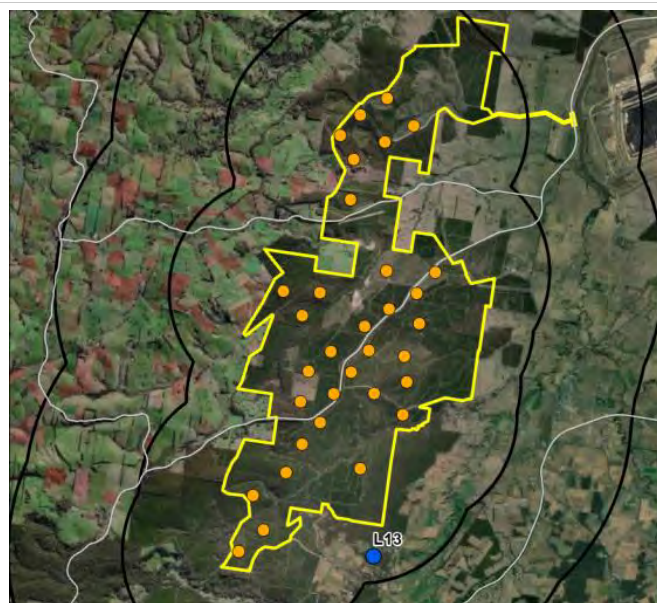


Figure 8-65: Viewpoint L13 – Existing view looking north-west

Viewpoint L13 is taken from a narrow stretch of road where roadside vegetation allows views towards the Project.

Existing vegetation will filter the majority of views along this section of McIntosh’s Road. Tips of turbines may be visible above the vegetation seen in Figure 8-63. Where visible views will be oblique to the direction of travel and for a brief duration where a gap in roadside vegetation allows. There are few locations where the turbines would be visible and by a limited number of road users. For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT L13 – MCINTOSH'S ROAD		
Distance	2.3km north-west (T29)	Will always be visually dominant in the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.5.4 Viewpoint L14 – Todds Road

Viewpoint L14 is located on an unsealed road called Todds Road off Darlimurla Road approximately 750 m north-west of the intersection with Darlimurla Road.

The nearest turbine (T32) is approximately 1.4 km west. Again, photomontages have been prepared due to the currently relatively open views and to assist with considering the alterations to the turbine layout.

Figure 8-66 shows the view looking south-west from Todds Road off Darlimurla Road.

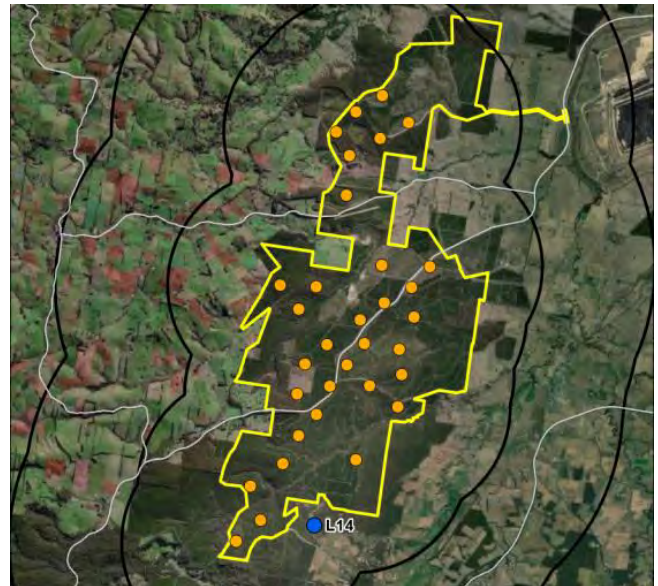


Figure 8-66: Viewpoint L14 – Existing view looking south-west

Figure 8-67 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-67: Viewpoint L14 – Photomontage Revised Layout (Layout 2.1)

Figure 8-68 shows an enlargement of the view focussing on the nearby turbines.



Figure 8-68: Enlargement Viewpoint L14 – Photomontage Revised Layout (Layout 2.1)

This view is one that would ordinarily be experienced by few, albeit local residents of the area. Over time, this view would also be screened by the existing timber plantations as demonstrated in Figure 8-66. For these reasons, the overall visual impact would be **Low**.

The photomontage and the enlargement shown in Figure 8-68 further demonstrates the way in which vegetation can be effective at screening or filtering views of structures that are up to 250 m in height and at distances of between 1-2 km of a turbine. The recently established pine trees in the plantation areas are approximately 3 – 4 meters in height. The turbines are on elevated topography, with the nearest being approximately 1.4 km. The nearby pines are of height and scale that can filter or screen views to the elevated turbine seen above bearing marker 333° to the right of the view.

VIEWPOINT L14 – TODDS ROAD		
Distance	1.4km west (T32)	Will always be visually dominant in the landscape
Landscape Unit	LU4b – Forested Hills (Plantation)	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.5 Viewpoint L15 – Darlimurla Road #3

Viewpoint L15 is located on Darlimurla Road approximately 100 m east of its intersection with Old Darlimurla Road.

The nearest turbine (T33) is approximately 1.7 km northeast.

Figure 8-69 shows the view looking northeast from Darlimurla Road.

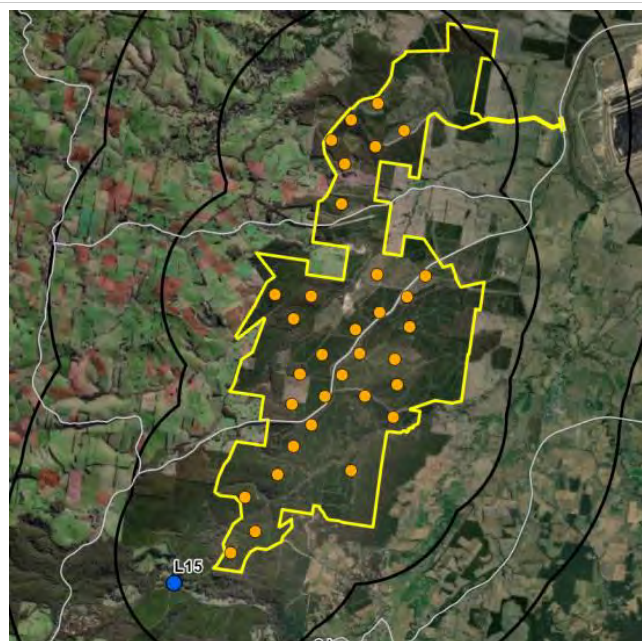


Figure 8-69: Viewpoint L15 – Existing view looking northeast

Figure 8-70 shows a wireframe view of the “Concept Layout” (V1.5, being 53 wind turbines). The wireframe view shows that the proposed wind turbines would be largely screened by topography and vegetation. From some locations, the tip of a turbine blade may be visible above vegetation.



Figure 8-70: Viewpoint L14 – Wireframe of Concept Layout (V1.5, being 53 wind turbines)

There may be glimpses of parts of turbines, where gaps in vegetation allow. However, due to existing topography and vegetation the turbines will be barely visible and from limited locations. Where visible, the turbines would not be dominant elements. For these reasons, the overall visual impact would be **Negligible - Nil**.

VIEWPOINT L15 – DARLIMURLA ROAD #3		
Distance	1.7km northeast (T33)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLIGIBLE - NIL	

8.5.6 Viewpoint L16 - Ten Mile Creek Road

Viewpoint L16 is located on Ten Mile Creek Road approximately 665m north-west of the Strzelecki Highway intersection.

The nearest turbine (T21) is approximately 1.6km east.

Virtual Reality imagery has also been prepared from this location.

Figure 8-71 shows the existing view looking northeast through east from Ten Mile Creek Road.

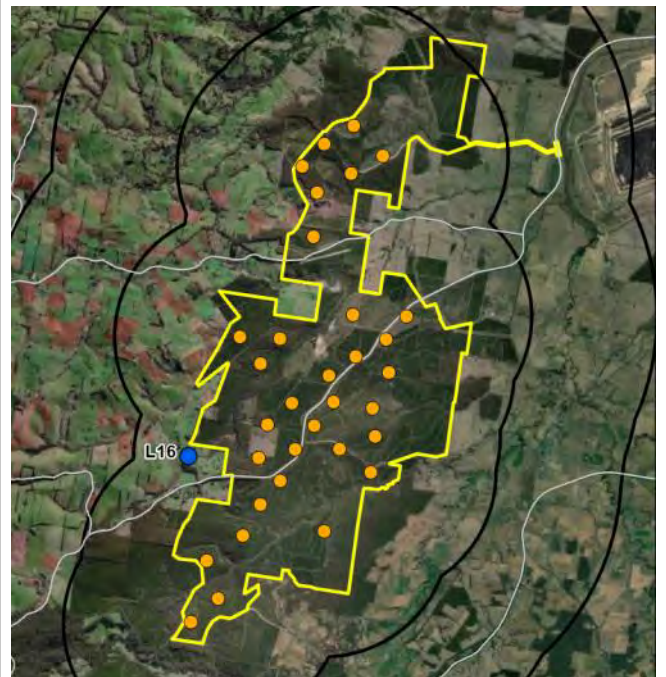


Figure 8-71: Viewpoint L16 – Existing view looking northeast to east

A virtual reality scene was also captured from this location for use at the community consultation days undertaken in March 2020. A still capture of this view is shown in Figure 8-72. The view in Figure 8-71 is more recent than the background imagery used for virtual reality imagery. A number of trees that are visible along the right-hand side of the virtual reality scene from of Ten Mile Creek Road have since been removed and are not shown in the existing view above.

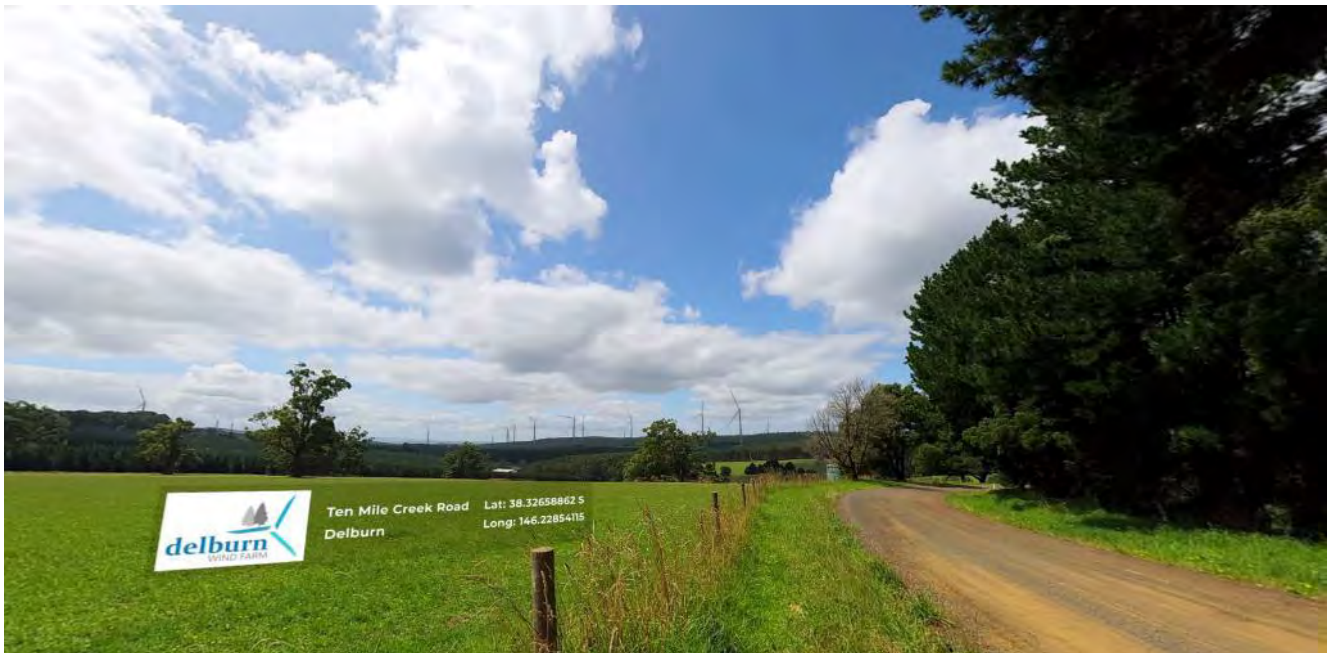


Figure 8-72 Ten Mile Creek Road Still Capture - Source Ignition Immersive Virtual Reality Footage Ten Mile Creek Delburn

<https://vimeo.com/395878305> (Password: OSMI-IGNITION)

Viewpoint L16 is taken from the section of Ten Mile Creek Road where it turns and heads east to align with the wind farm. Limited roadside vegetation and the elevated nature allow clear views to the middle section of the wind farm.

While there will be a clear view towards the majority of the wind farm, views are over Landscape Unit 2b which is recognised as having a low-moderate sensitivity to change, there are also few, albeit the same people who will take in this view. The scale of the turbines in the context of this view is commensurate with the existing roadside and other vegetation found in the landscape between this location and the turbines. For these reasons, the overall visual impact for road users of Ten Mile Creek Road would be **Low**.

VIEWPOINT L16 – TEN MILE CREEK ROAD		
Distance	1.6km east (T21)	Will always be visually dominant in the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	Low	

8.5.7 Viewpoint L17 – McDonalds Track #1

Viewpoint L17 is located on McDonalds Track approximately 1.2 km east of its intersection with Mirboo North – Trafalgar Road.

The nearest turbine (T24) is approximately 5.3 km northeast.

Figure 8-73 shows the view looking northeast from McDonalds Track.

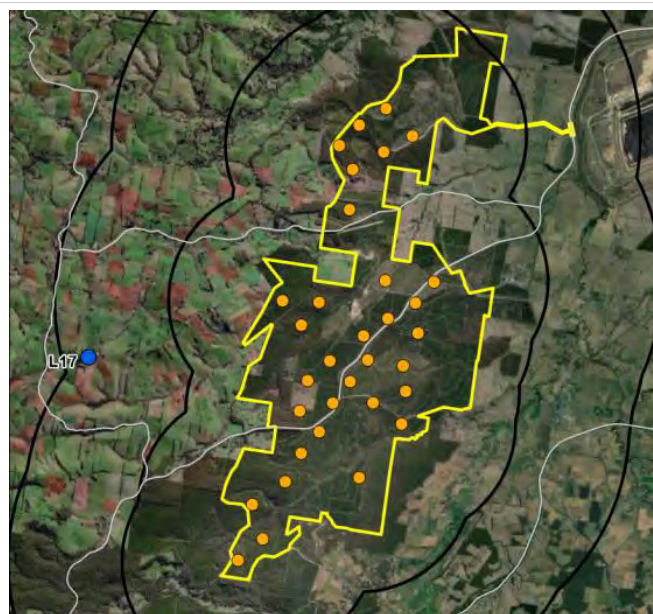


Figure 8-73: Viewpoint L17 – Existing view looking northeast

Figure 8-73 is taken through a break in roadside vegetation which allows for views over the cleared farmland towards the Project.

Vegetation on the roadside and within property boundaries will filter some views to turbines, at a distance of approximately 5.2 km, the turbines have the potential to be highly visible, due to the fleeting nature of views, topography and vegetation in the surrounding landscape, the turbines will not be visually dominant features. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L17 – MCDONALDS TRACK #1		
Distance	5.3km northeast (T24)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.8 Viewpoint L18 - McDonalds Track #2

Viewpoint L18 is located on McDonalds Track approximately 530m north-west of the intersection with Chute Road.

The nearest turbine (T24) is approximately 10.4km northeast.

Figure 8-74 shows the view looking east from McDonalds Track.

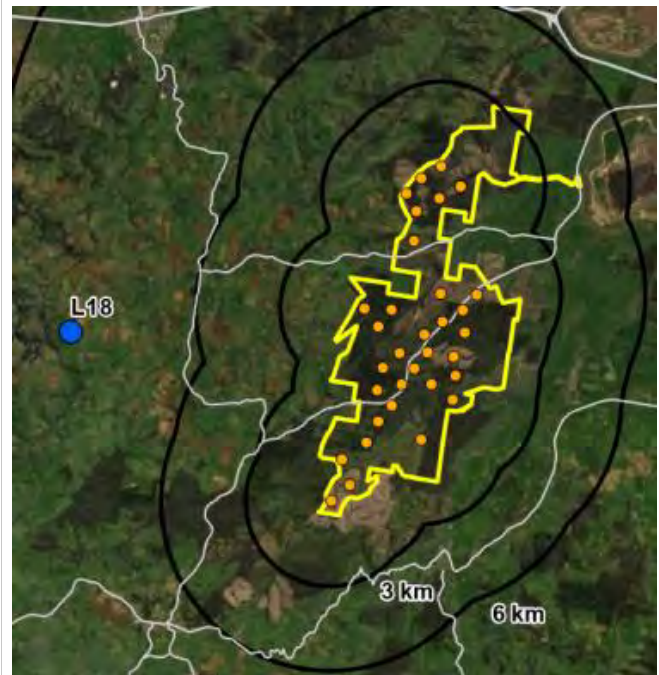


Figure 8-74: Viewpoint L18 – Existing view looking east

Viewpoint L18 is taken from an elevated section of McDonalds Track at the eastern end of a line of roadside vegetation where clear views through to the Project would be available for road users travelling east along this section of road before turning right and descending into one of the many local valleys and depressions along this section of road.

At a distance of 10.4km the turbines have the potential to be visible but would not be a dominant element in the view. However, this will be from the small section of road where breaks in vegetation and the alignment of the road allow views. Few road users would take in this particular view. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L18 – MCDONALDS TRACK #2		
Distance	10.4km northeast (T24)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.9 Viewpoint L19 - Childers – Thorpdale Road

Viewpoint L19 is located on Childers-Thorpdale Road at the intersection of Sunny Creek Road.

The nearest turbine (T24) is approximately 8.4km east.

Figure 8-75 shows the view looking south-east from Childers-Thorpdale Road.

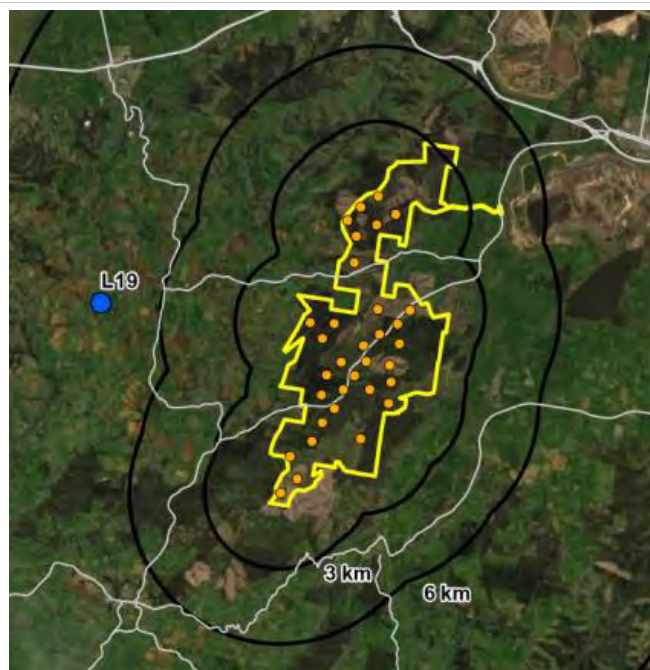


Figure 8-75: Viewpoint L19 – Existing view looking south-east

Viewpoint L19 is taken from where vegetation and the alignment of Childers-Thorpdale Road allow for views towards the Project.

At a distance of 8.4km the turbines have the potential to be visible but would not be a dominant element in the view. However, this will be from a relatively short section of road and oblique to the direction of travel.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L19 – CHILDERS-THORPDALE ROAD		
Distance	8.4km east (T24)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.10 Viewpoint L20 - Narracan Connection Road

Viewpoint L20 is located on Narracan Connection Road approximately 325m south-east of the Rogers Road intersection.

The nearest turbine (T05) is approximately 5.0km east.

Figure 8-76 shows the view looking south-east from Narracan Connection Road.

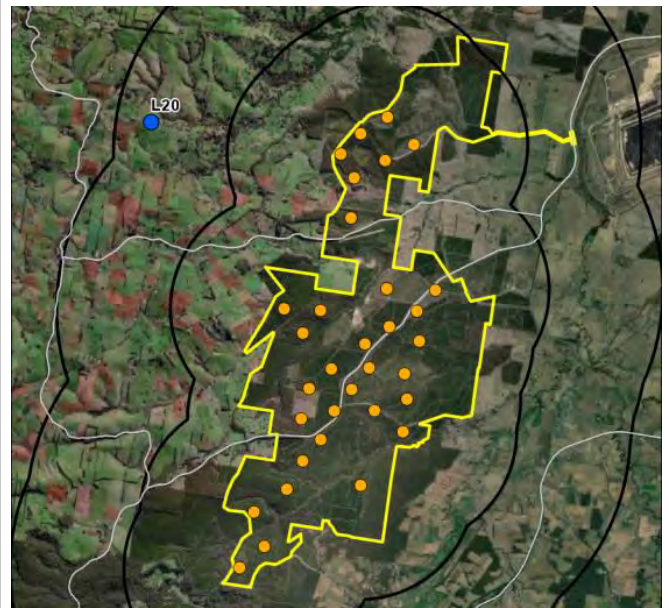


Figure 8-76: Viewpoint L20 – Existing view looking south-east

Viewpoint L20 is taken from a section of Narracan Connection Road vegetation along the roadside and in nearby farming land allow views towards the project.

At a distance of approximately 5.0km, the wind turbines will be a noticeable element in views afforded by breaks in vegetation and topography. Views from this location are over Landscape Unit 2b – Cleared Hilly Farmland, which has a low to moderate sensitivity to visual change and with few road users taking in this particular view.

For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L20 – NARRACAN CONNECTION ROAD		
Distance	5.0km east (T05)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW	

8.5.11 Viewpoint L21 – McDonalds Track #3

Viewpoint L21 is located on McDonalds Track approximately 850 m northeast of the intersection with Morwell-Thorpdale Road.

The nearest turbine (T24) is approximately 2.6 km south-east.

Virtual Reality imagery has also been prepared from this location.

Figure 8-77 shows the existing view looking south-east from McDonalds Track where a break in roadside vegetation allows for views to the Project.

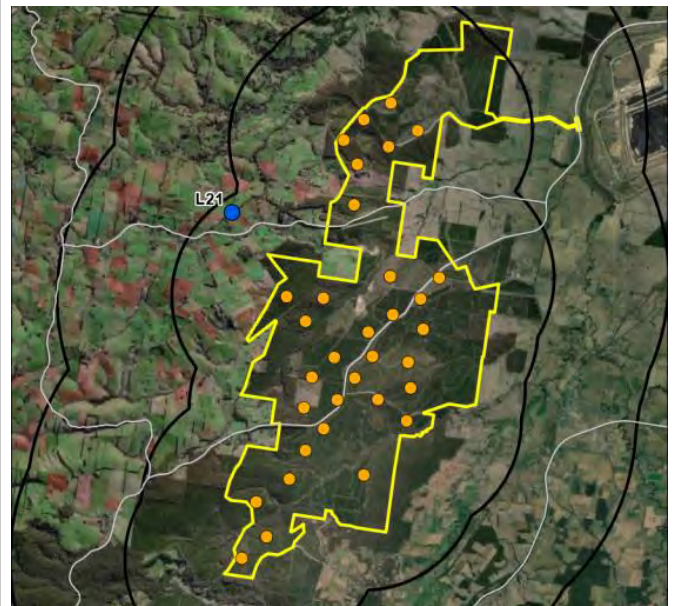


Figure 8-77: Viewpoint L21 – Existing view looking south-east

Figure 8-78 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-78: Viewpoint L21 – Photomontage Revised Layout (Layout 2.1)

Figure 8-79 shows a still capture in the animated virtual reality scene prepared by Ignition Immersive studios from the same location. This scene formed one of six that were made available at the community consultation days undertaken in March 2020.



Figure 8-79 McDonalds Track Still Capture - Source Ignition Immersive Studios Virtual Reality Scene McDonalds Track Narracan

<https://vimeo.com/395877940> (Password: OSMI-IGNITION)

Viewpoint L21 shows the view across nearby rolling hills and farmland that allow long views to the east and views towards the Project.

At a distance of approximately 2.4 km, the proposed wind turbines have the potential to be a dominant visual element in this view. However, when compared to the existing vegetation and turbine placement on the nearby hills, the turbines are not out of scale or context. Views, while picturesque are fleeting for road users are not in a location where formal roadside stops are provided to stop or take in this view. For these reasons, the overall visual impact would be **Low**.

VIEWPOINT L21 – MCDONALDS TRACK #3		
Distance	2.6km south-east (T24)	Will always be visually dominant in the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-MODERATE	

8.5.12 Viewpoint L22 – Sayers Track

Viewpoint L22 is located on Sayers Track approximately 600 m east of its intersection with McDonalds Track.

The nearest turbine (T03) is approximately 3.0 km south-west.

Figure 8-80 shows the existing view looking south-east from Sayers Track.

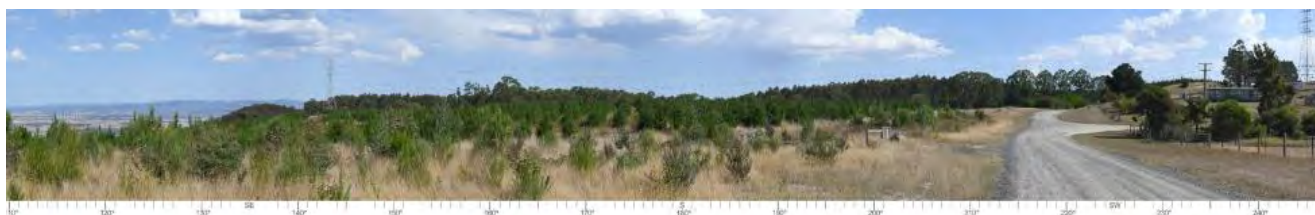
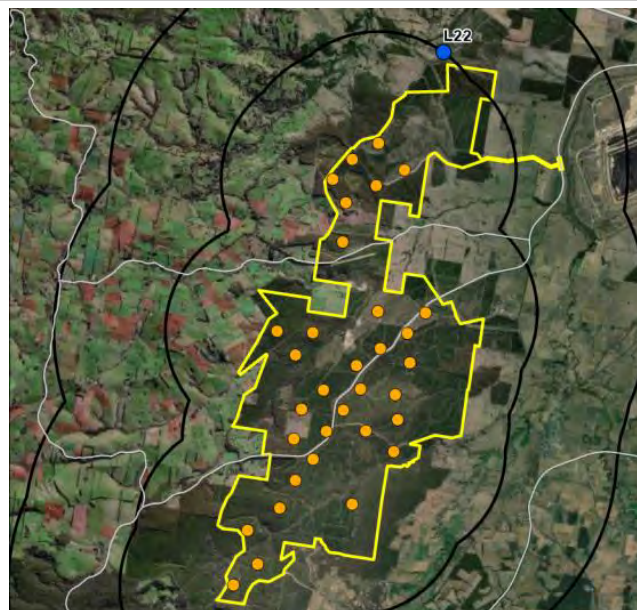


Figure 8-80: Viewpoint L22 – Existing view looking south-east

There are long views to the lower plains which include the Hazelwood Cooling Pond, former power station and high voltage power lines. The existing 220 kV power line relevant to this project can be seen in the foreground of this view. Views towards the Project and the existing high-voltage transmission line will be closed out by the recently planted and establishing timber plantation.

Figure 8-81 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.

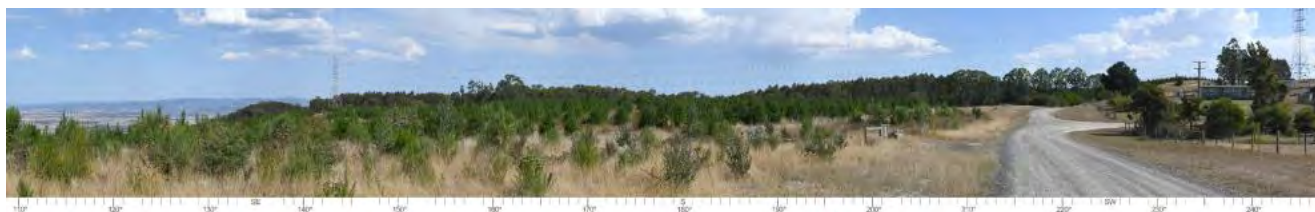


Figure 8-81: Viewpoint L22 – Photomontage Revised Layout (Layout 2.1)

The tips of turbines located in the northern section of the Project have the potential to be visible above the vegetation seen in Figure 8-80. Where visible they will appear less dominant than the large vertical infrastructure seen to the right of Figure 8-80 and seen by few road users.

For these reasons, the overall visual impact would be **Negligible**. Over time, this would reduce to **Nil**.

VIEWPOINT L22 – SAYERS TRACK		
Distance	3.0km south-west (T03)	Will always be visually dominant in the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLIGIBLE - NIL	

8.5.13 Viewpoint L23 – McDonalds Track #4

Viewpoint L23 is located on McDonalds Track approximately 450 m north-west of the intersection with Sayers Track.

The nearest turbine (T03) is approximately 2.8 km south-west.

Figure 8-82 shows the view looking south-east from McDonalds Track.

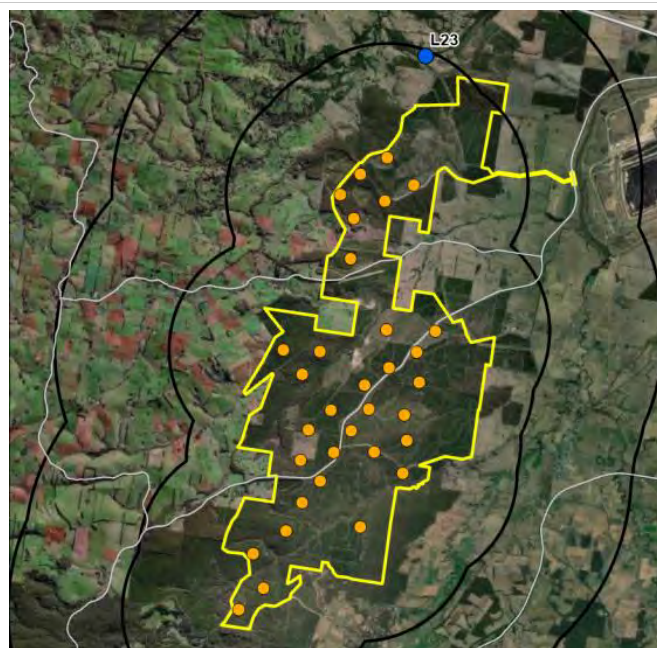


Figure 8-82: Viewpoint L23 – Existing view looking south-east

Viewpoint L23 is located on the edge of the SLO1 within the Baw Baw Shire area. Existing vegetation along the roadside and nearby properties filter or screen the majority of views to the surrounding landscape and towards the Project. Views from this location also include the existing high voltage transmission line. With the turbines being approximately 2.8 km in the distance, the nearby would be visually larger and more noticeable than the turbines.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT L23 – MCDONALDS TRACK #4		
Distance	2.8km south-west (T03)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.5.14 Viewpoint L24 – Moe South Road

Viewpoint L24 is located on Moe South Road approximately 1.3km west of the intersection with Genaro Road.

The nearest turbine (T04) is approximately 5.4 km south-east.

Figure 8-83 shows the view looking south from Moe South Road.

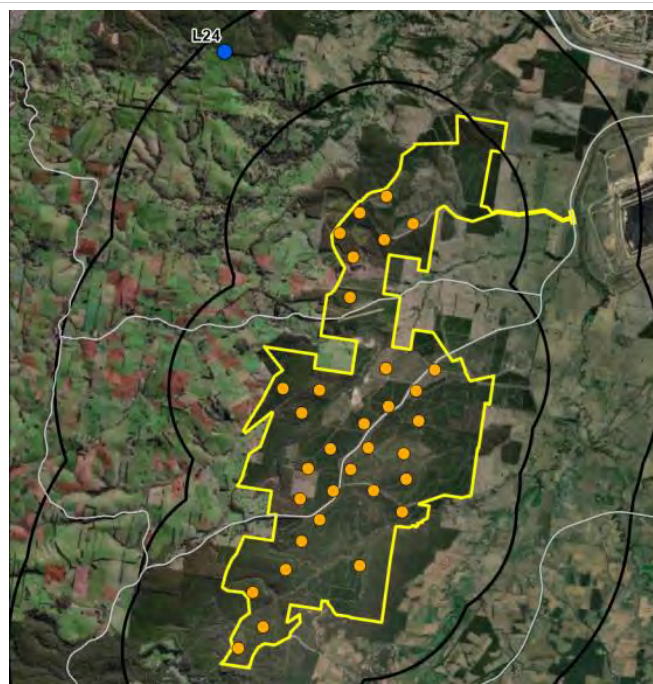


Figure 8-83: Viewpoint L24 – Existing view looking south

Viewpoint L24 is taken from a section of Moe South Road where breaks vegetation along the roadside and nearby farming properties allow views south and towards the Project. Existing dual circuit high voltage transmission lines are located in the farming areas in the foreground of this view.

The landscape seen in the foreground of Figure 8-83 is covered by the SLO1 within the Baw Baw Shire. SLO1 seeks to, amongst other things protect the landscape form of the Strzelecki Range and the rural landscape from insensitively designed development and to protect them and the surrounding landscapes from visual intrusion and inappropriate development. The proposed turbines would be in the background of this view. Figure 8-84 shows an enlargement of the view in the direction of the proposed turbines.



Figure 8-84: Enlargement Viewpoint L24 – Existing view looking south

Several turbines located in the northern section of the wind farm would be visible above the hills seen in the background of the view. The proposed wind farm, while visible, will not alter the landform of the Strzelecki Range

and will reside in views that include existing high voltage transmission lines as foreground and noticeable elements.

Views from this location will be oblique to the direction of travel and largely screened or filtered by nearby roadside vegetation. However, the view is over a landscape that is highly modified to include transmission lines and other large vertical structures as seen in Figure 8-83.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT L24– MOE SOUTH ROAD		
Distance	5.4km south-east (T04)	Highly visible and will usually dominate the landscape
Landscape Unit	LU2b – Cleared Hilly Farmland	Low-Moderate
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.5.15 Summary of Local Roads Viewpoints

The assessment of views and visual impacts from local roads reviewed 24 locations from a range of distances and viewing angles towards the Project. The assessment of these views concluded that overall, the visual impact from local roads would be low. This assessment considered the viewer numbers, landscape sensitivity, availability and duration of views, and, was supported by imagery from the site, photomontages and virtual reality imagery presented to the community at the community consultation days. Table 8-8 summarises the overall visual impact for each location.

Table 8-8 Summary of the overall visual impact from local roads

VP	Location	Nearest Turbine Rev 3.	Visual Impact
L1	Haunted Hills Road	6.5km SW (T03)	Low-Negligible
L2	Jeeralang North Road	17.6km W (T16)	Negligible
L3	Red Hill Road	24.4km NW (T19)	Negligible
L4	Jumbuk Road	10.4km NW (T19)	Negligible
L5	Hazelwood Estate/Walshs Rd	7.3km NW (T16)	Low
L6	Yinnar-Driffield Road	2.9km SW (T16)	Low
L7	Creamery Road	2.3km W (T18)	Low-Moderate
L8	Vaggs Road	3.2km W (T29)	Low
L9	Nuttalls Road	2.9km NW (T19)	Low
L10	Bunderra Drive	2.6km NW (T32)	Low
L11	Darlimurla Road #1	2.7km NW (T29)	Low-Negligible
L12	Darlimurla Road #2	2.0km NW (T32)	Low-Negligible
L13	McIntosh's Road	2.3km NW (T29)	Low-Negligible
L14	Todds Road	1.4km W (T32)	Low
L15	Darlimurla Road #3	1.7km NE (T33)	Negligible - Nil
L16	Ten Mile Creek Road	1.6km E (T21)	Low
L17	McDonalds Track #1	5.3km NE (T24)	Low
L18	McDonalds Track #2	10.4km NE (T24)	Low
L19	Childers-Thorpdale Road	8.4km E (T24)	Low
L20	Narracan Connection Road	5.0km E (T05)	Low
L21	McDonalds Track #3	2.6km SE (T24)	Low-Moderate

L22	Sayers Track	3.0km SW (T03)	Negligible-Nil
L23	McDonalds Track	2.8km SW (T03)	Negligible
L24	Moe South Road	5.4km SE (T04)	Low-Negligible
OVERALL VISUAL IMPACT – LOCAL ROADS			LOW

Views and visibility of the proposed turbines from local roads will vary greatly depending on location and proximity to the Project. The local road network is located within a landscape of great diversity ranging from views over cleared flat farmland where long views are available across the valley floor and plain, through to confined views from the tightly folding landscape of the vegetated elevated hills.

Local roads within the area to the west tend to be more confined due to the rolling hills, extensive roadside vegetation and trees within the pine plantations of the Project. Views in this location tend to be more dramatic due to the regular closing and opening up of views across the landscape permitted by topography and vegetation.

More broadly the views from areas to the east of the project that is near to or within the land in the SUZ1 would be less sensitive to visual change due to the presence of electrical generating and distributing infrastructure, there are however sensitive views to elevated features such as Strzelecki Ranges and Mt Baw Baw.

Overall visual impact from local roads is assessed as Low. This is in part due to viewer numbers and the visibility of turbines which would be influenced by topography and vegetation and the context of the view where these are available.

8.6 Townships

Twelve viewpoint locations (T1-T12) have been selected as representative of the visual impact on viewers using the townships within the viewshed.

Landscape sensitivity is assessed as moderate/high due to the residential component of townships, while the viewer numbers range from low to high depending on the township.

Each viewpoint location is shown in Figure 8-85.

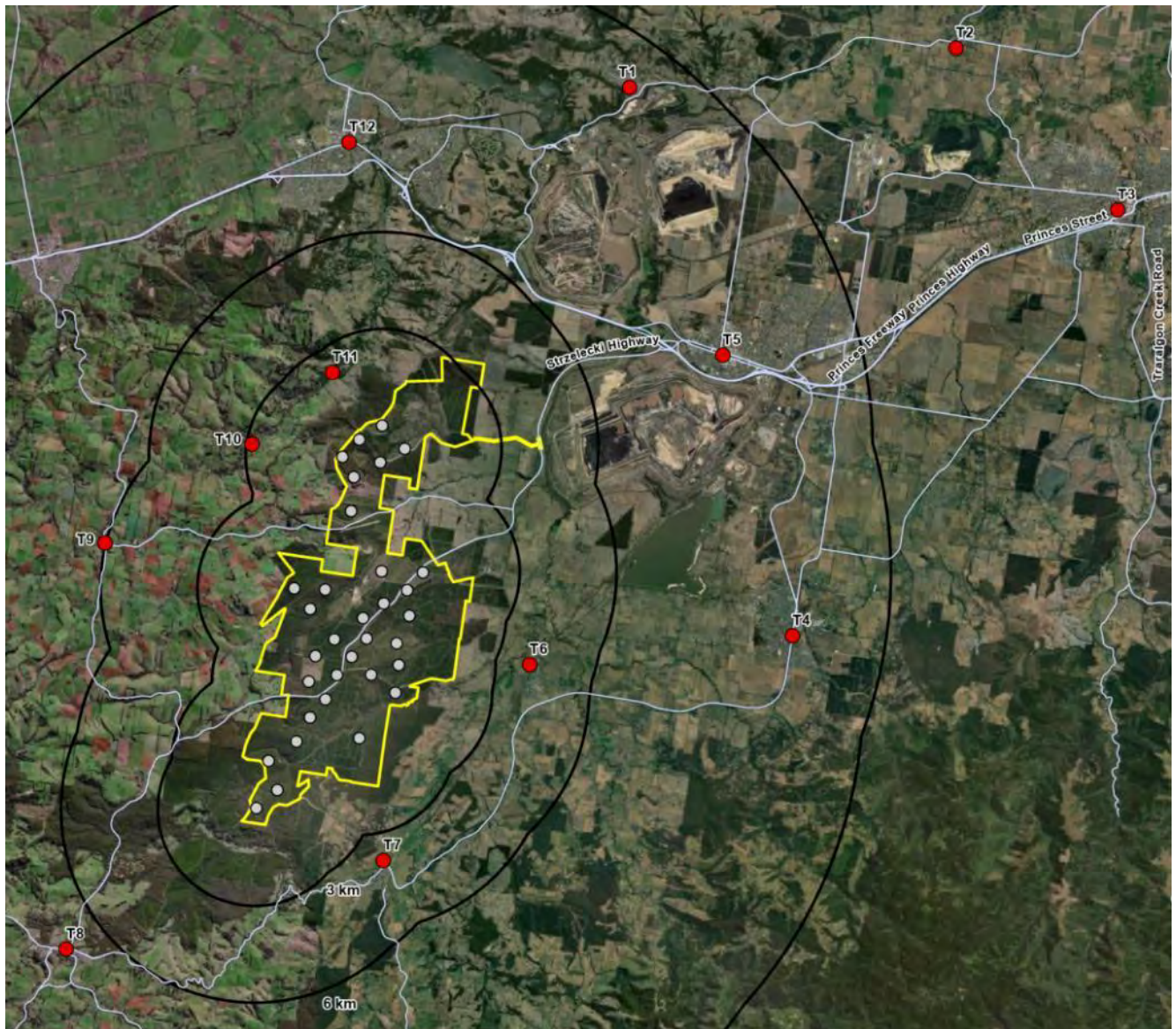


Figure 8-85: Township Viewpoint Locations

The viewpoint location, corresponding GPS co-ordinates, distances to the nearest wind turbine and landscape sensitivities are listed in Table 8-9.

Virtual reality scenes and photomontages were prepared from Yinnar Township

Table 8-9: Township Viewpoint Locations

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
T1	Yallourn	55H 444194, 5776042	13km SW (T03)	Unit 1a
T2	Tyers	55H 454305, 5777264	21km SW (T01)	Unit 1a
T3	Traralgon	55H 459315, 5772249	23km SW (T01)	Unit 1a
T4	Churchill	55H 449238, 5759046	11.6km W (T16)	Unit 1a
T5	Morwell	55H 447080, 5767745	10.2km SW (T01)	Unit 1a
T6	Yinnar	55H 441097, 5758150	4.0km W (T14)	Unit 1a
T7	Boolarra	55H 436563, 5752078	3.8km NW (T29)	Unit 1a
T8	Mirboo North	55H 426733, 5749334	7.3km NE (T33)	Unit 1a
T9	Thorpdale	55H 428175, 5762013	6.0km E (T24)	Unit 1a
T10	Narracan	55H 432495, 5764986	2.8km E (T05)	Unit 4a
T11	Coalville	55H 434986, 5767209	2.2km SE (T04)	Unit 4a
T12	Moe	55H 435501, 5774344	8.8km S (T03)	Unit 1a

8.6.1 Viewpoint T1 – Yallourn

Viewpoint T1 is located at the Yallourn North Oval.

The nearest turbine (T03) is approximately 13 km south-west.

Figure 8-86 shows the view looking south-west from the edge of Yallourn North Oval near the playground.

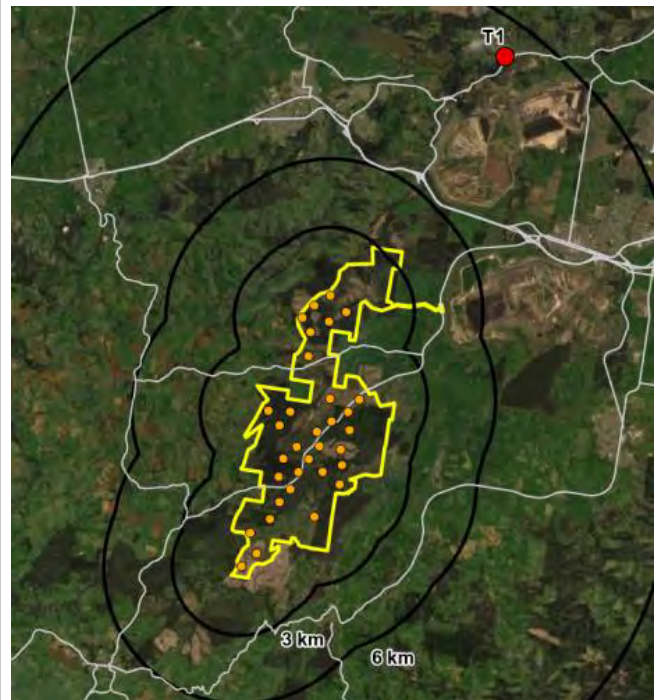


Figure 8-86: Viewpoint T1 – Existing view looking south-west

The landscape sensitivity of townships is rated medium, however at a distance of approximately 13km wind turbines would not be a noticeable element within the view. From this location, they would most likely be completely screened by existing vegetation on the southern edge of the township.

For these reasons, the overall visual impact would be **Negligible - Nil**.

VIEWPOINT T1 – YALLOURN		
Distance	13km south-west (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Townships	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE - NIL	

8.6.2 Viewpoint T2 – Tyers

Viewpoint T2 is located in the township of Tyers.

The nearest turbine (T01) is approximately 21.0 km south-west.

Figure 8-87 shows the view looking south-west from the edge of Tyers Recreation Reserve.

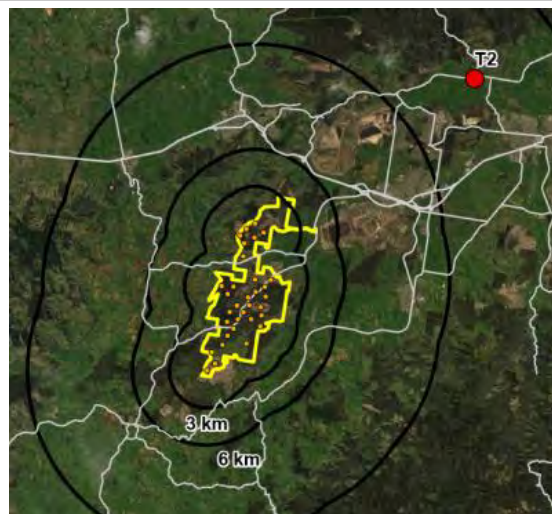


Figure 8-87: Viewpoint T2 – Existing view looking south-west from Tyers Recreation Reserve

Figure 8-88 shows the view looking south-west from Tyers Road on the western outskirts of Tyers. The closest turbine is also (T01) 21km southwest.



Figure 8-88: Viewpoint T2 – Existing view looking south-west from Tyers Road

These two views have been taken from the edge of the township and absent of vegetation and buildings that would screen or filter views towards the Project. At a distance of approximately 21.0 km the turbines may be visible on clear days, however, at a distance of approximately 21 km, would not be dominant features in these views. Views towards the project also include many other constructed elements including nearby transmission lines, operation power stations and associated development

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT T2 – TYERS		
Distance	21km south-west (T01)	Discernible, but will not be dominant in views
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.6.3 Viewpoint T3 – Traralgon

Viewpoint T3 is located in Traralgon.

The nearest turbine (T01) is approximately 23.0 km south-west.

Figure 8-89 shows the view looking south-west along Church Street.

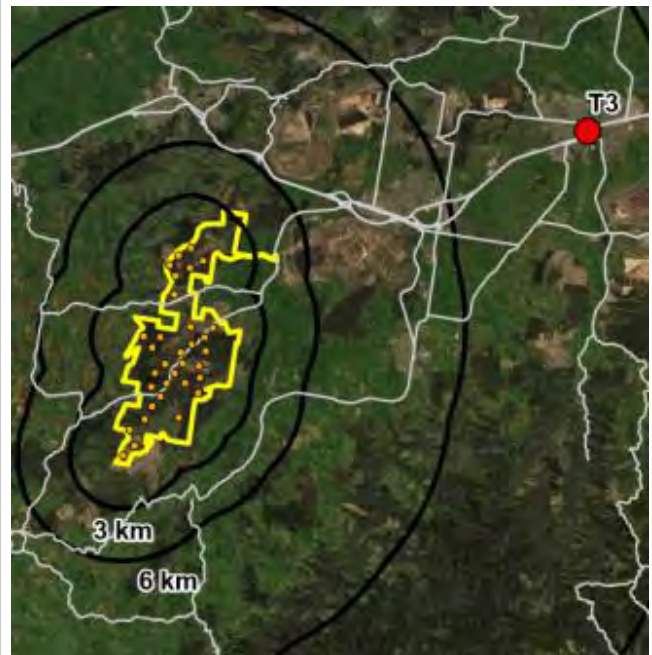


Figure 8-89: Viewpoint T3 – Existing view looking south-west along Church Street

The landscape sensitivity of townships is rated medium, however at a distance of approximately 23.0 km wind turbines would not be a noticeable element within the view. From this location they would be completely screened by existing buildings and vegetation with the township.

Figure 8-90 shows the view looking south-west from the new estate on the outskirts of Traralgon.



Figure 8-90: Viewpoint T3 – Existing view looking south-west from the outskirts of Traralgon

Built from within the majority of the estate will filter or screen views from within the estate towards the proposed wind farm. Figure 8-91. Shows the view from the western edge of a new development stage that is yet to be established with houses, landscaping and streetscape elements. As such there are clear views towards the wind farm over farming land to the east of the Project.



Figure 8-91: Viewpoint T3 – Existing view looking south-west from the outskirts of Traralgon

The majority of views towards the project from residential areas within the new residential subdivisions would be screened from views. Where turbines are visible, they would be at a distance of approximately 20 km and a small element within the views.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT T3 – TRARALGON		
Distance	23km south-west (T01)	Discernible, but will not be dominant in views
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.6.4 Viewpoint T4 – Churchill

Viewpoint T4 is located in Churchill.

The nearest turbine (T16) is approximately 11.6 km west.

The SAA modelling described in Section 8 of the report demonstrated theoretical turbine visibility from many areas within Churchill.

Figure 8-92 shows the view looking northeast near the retail precinct location on Monash Way towards the centre of town.

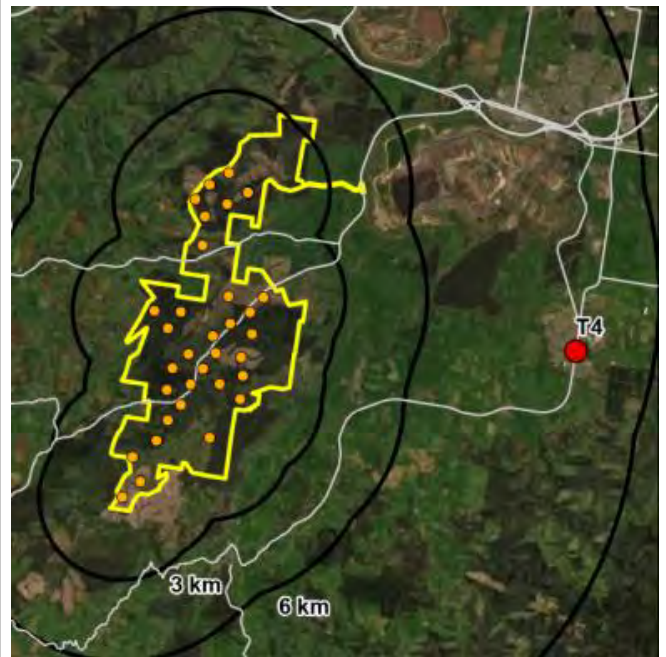


Figure 8-92: Viewpoint T4 – Existing view from the Churchill retail complex

Views towards the project area and the proposed turbines from this location and the nearby areas within Churchill would be screened by existing buildings, vegetation and topography.

Figure 8-93 shows the view looking west along Switchback Road near the intersection Blackwood Crescent looking west. This location was selected as it is slightly elevated and provides views over built form, fences and vegetation towards the hills on which the project is proposed to be located



Figure 8-93: Viewpoint T4 – Existing view looking west

From this location, turbines would be visible along the elevated hills and ridgeline seen along Switchback Road, and between vegetation and existing buildings. At a distance of approximately 11.6 km, the turbines have the potential to be noticeable, however in the context of these views, which include many other constructed elements, they would not be visually dominant and less obvious than the many other constructed elements already visible.

Many views to the west from Churchill are modified to include existing power infrastructure associated with brown coal reserves and power stations located within the land zoned SUZ.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT T4 – CHURCHILL		
Distance	11.6km west (T16)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.6.5 Viewpoint T5 – Morwell

Viewpoint T5 is located in Morwell.

The nearest turbine (T01) is approximately 10.2 km south-west.

Figure 8-94 shows the existing view from the edge of the Morwell Recreation Reserve.

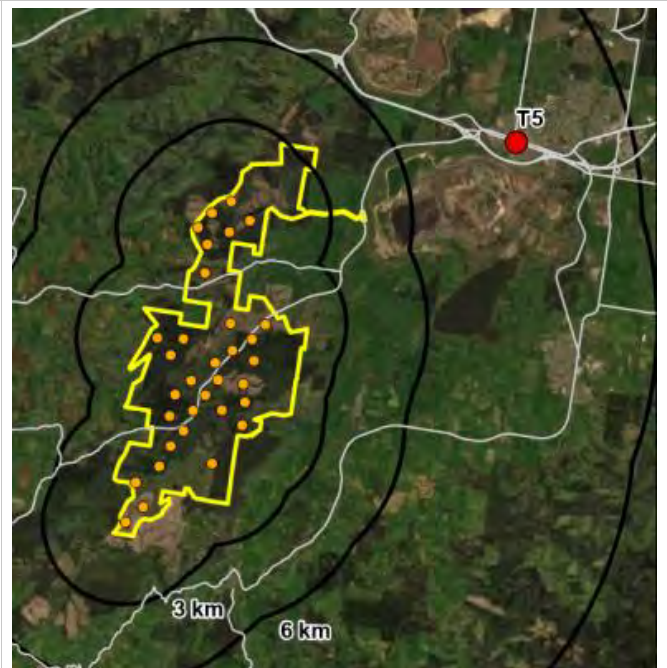


Figure 8-94: Viewpoint T5 – Existing view looking from the edge of Morwell Recreation Reserve

Turbines may be visible to the centre of Figure 8-94, but would not be a dominant element in the view. There are many vertical elements in view, including vertical poles within the recreation reserve and infrastructure around the former Hazelwood power station.

Figure 8-95 shows the views along Commercial Road near the local council office.



Figure 8-95: Viewpoint T5 – Existing view looking along Commercial Road

Views from within Morwell township will be screened by existing buildings, vegetation and other urban elements located within and around the town.

Figure 8-96 shows the view from the elevated rotunda located roughly central to Norman Sharpe Reserve.



Figure 8-96: Viewpoint T5 – Existing view looking from Norman Sharpe Reserve

Turbines may be visible on the elevated hills in the background, however, in this context, the turbines would not be dominant features in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT T5 – MORWELL		
Distance	10.2km south-west (T01)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.6.6 Viewpoint T6 – Yinnar

Viewpoint T6 is located in Yinnar.

The nearest turbine (T14) is approximately 4.0 km north-west. Photomontages have been prepared to assist with considering views from the broader landscape. The change in these views from alterations to the turbine layout has been also been captured in these images.

A photomontage and virtual reality scene have been prepared from within the town to assist with considering views towards the project and visual impact.

Figure 8-97 shows the view looking south along Main Street which runs through the centre of town.

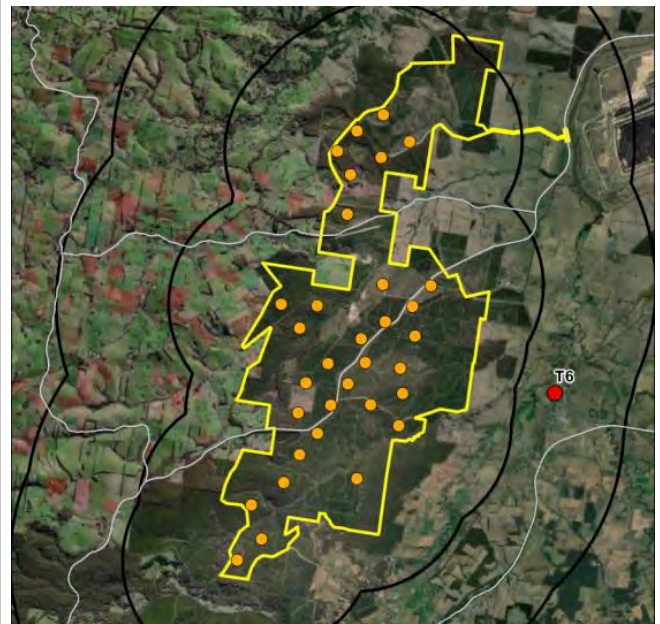


Figure 8-97: Viewpoint T6 – Yinnar character images

Retail shops and cafés are located along the eastern side of the main street, with several service businesses and other development along the western side. The former train line which ran through to Mirboo North also runs along the western edge and parallel to Main Street. Vegetation located along the rail reserve and surrounding streetscape can also be seen in this view.

Figure 8-98 shows the view looking west from Creamery Road towards the southern end of Yinnar.



Figure 8-98 View from Creamery Road looking west

From this southern end of Yinnar and west of Main Road there is the potential for open views towards the turbines located at the northern end of the project.

Figure 8-102 shows the view from the Yinnar Football oval which is located east of the town on Jumbuk Road.



Figure 8-99: Viewpoint T6 – Yinnar Football Oval

Views from within the Yinnar Football Oval will be filtered by the existing vegetation along the western edge. Clear views towards the Project will be seen by people travelling from the Yinnar Football Oval back into town along Jumbuk Road where it aligns with the centre of the windfarm and clear flat farmland and limited vegetation allows for views.

Figure 8-100 shows the view looking east from the picnic bench within Yinnar Centenary Gardens.

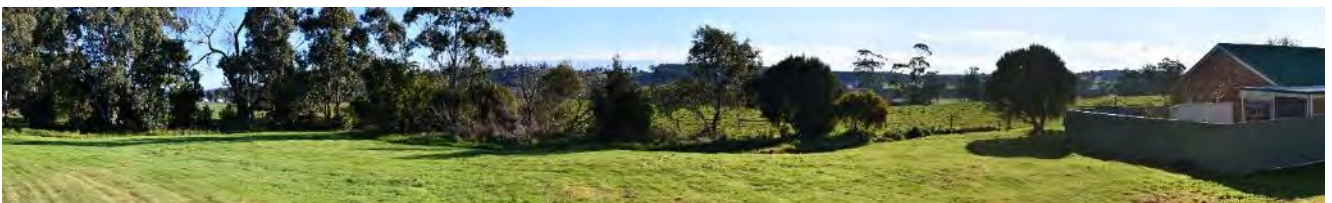


Figure 8-100: Viewpoint T6 – Yinnar Township

Views from within the gardens will be filtered by existing vegetation along the western edge of the gardens. Where visible they will not be a dominant element in the view. A virtual reality scene was prepared from this location. A still from this scene is shown in Figure 8-101. The full view from this location includes the more

substantial vegetation along the former rail corridor to the left of the view which provides screening to the majority of the project.



Figure 8-101 Yinnar Township Still Capture – Source Ignition Immersive Studios Virtual Reality Scene Yinnar Township Yinnar

<https://vimeo.com/395878400> (Password: OSMI-IGNITION)

The turbines are visible behind the plantation areas in the background of this still capture. This view also demonstrates the effectiveness of small trees and low shrubs seen in the centre of this view shows at screening turbines which are at a distance of approximately 4.0 km and on elevated hills.

Figure 8-102 shows the existing view looking west of gravel parking area behind buildings to the west of Main Street.



Figure 8-102: Viewpoint T6 – Existing view looking west from the roadside stop

Figure 8-103 shows a photomontage of the same view with the turbines from an earlier layout (Layout 2.1) superimposed into the view. This layout was used as the basis for environmental referrals and provides for a sense of scale and likely turbine visibility from this location. Due to distance, the changes in turbine layout and placement and reduction in turbine numbers between versions 2.1 and 3.5 would not be a noticeable change in views and therefore are still relevant to informing this Landscape and Visual Impact Assessment.



Figure 8-103: Viewpoint T6 – Photomontage Revised Layout (Layout 2.1)

Figure 8-104 shows an enlargement of the photomontage focused on the nearby, visible turbines.



Figure 8-104: Enlargement Viewpoint T6 – Photomontage Revised Layout (Layout 2.1)

This enlarged view of the photomontage shows that where there are clear views over farmland that the proposed turbines have the potential to be visually dominant features. It is recognised, however, that the visual impact will be dependent on the perception of turbines and individuals' perspectives on renewable energy.

The selection of views and imagery from locations within and around Yinnar demonstrate that there is a broad range of views, visual settings and screening from areas within the town. There will be locations with clear and open views towards the proposed wind turbines, however, these locations would be limited and generally towards the western edges of the town. The majority of views are either completely screened or filtered by either built form and vegetation within private allotments, public reserves and parks, road reserves and surrounding farming areas.

The visual impact from the majority areas within Yinnar would range from **Nil-Low**. From locations areas along the western edge of town, the visual impact would be **Moderate**. For these reasons, the overall visual impact from Yinnar township is considered to be **Low**.

VIEWPOINT T6 – YINNAR		
Distance	4.0km north-west (T14)	Highly visible and will usually dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	LOW	

8.6.7 Viewpoint T7 – Boolarra

Viewpoint T7 is located in Boolarra.

The nearest turbine (T29) is approximately 3.8 km north-west.

Figure 8-105 shows the view looking back towards town along Duke Street.

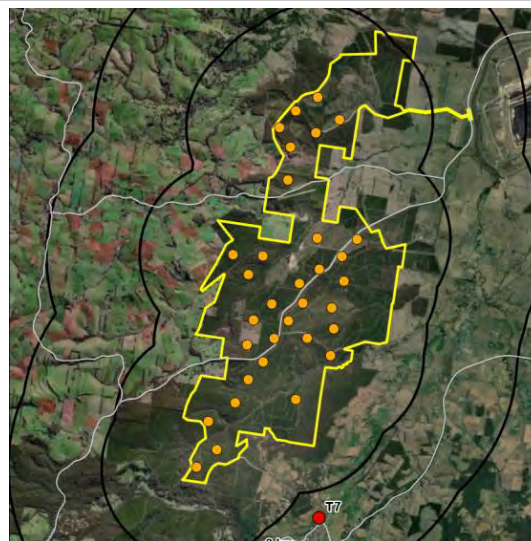


Figure 8-105: Viewpoint T7 – Existing view looking back towards town along Duke St

Figure 8-106 shows the view looking north from Foster Road at the southern edge of Boolarra.



Figure 8-106: Viewpoint T7 – Existing view looking north along Foster Road.

Views from within the town are largely screened by existing topography, vegetation and buildings within the township. There may be longer views along roads where turbines to the north are visible. These would be at distances of approximately 6.0 km and would be smaller in scale than urban elements such as light and telegraph poles also seen in these views.

Due to the limited visibility of the turbines from the town and extensive screening provided by topography and vegetation, the overall visual impact would be **Low-Negligible**.

VIEWPOINT T7 – BOOLARRA		
Distance	3.8km north-west (T29)	Highly visible and will usually dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.6.8 Viewpoint T8 – Mirboo North

Viewpoint T8 is located in Mirboo North.

The nearest turbine (T33) approximately 7.3 km to the northeast.

Figure 8-107 shows the view looking along the Strzelecki Highway approximately 100 m west of its intersection with Grand Ridge East Road towards the western end of the Grand Ridge Rail Trail which ends at Baromi Park shown in Figure 8-108.

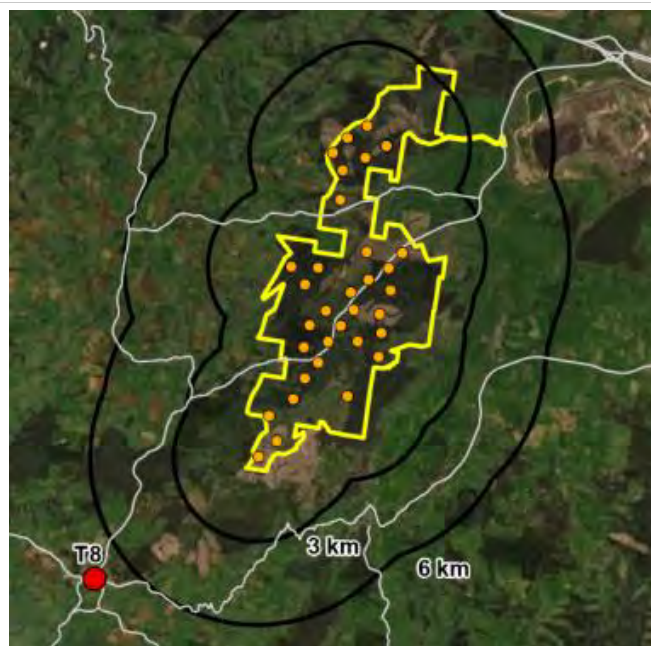


Figure 8-107: Viewpoint T8 – Existing view looking along the Strzelecki Highway

Views from within town will be largely screened or filtered by existing buildings and vegetation in foreground views and topography and vegetation in longer views towards the Project.

Figure 8-108 shows the view from Baromi park to the north of the main street and retail shops.



Figure 8-108: Viewpoint T8 – Existing view looking northeast towards the project from the park behind the main street

Turbines may be visible through breaks in vegetation seen in the background of the view. These locations would be limited to few locations within and around the town. Where turbines are visible, they would be at a distance of approximately 7.1 km and although noticeable, in the context of these views, would not be visually dominant features.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT T8 – MIRBOO NORTH		
Distance	7.3km northeast (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.6.9 Viewpoint T9 – Thorpdale

Viewpoint T9 is located in Thorpdale.

The nearest turbine (T24) is approximately 6.0 km to the east.

Figure 8-109 shows views of the streetscape and areas within Thorpdale.

The SAA model discussed in Section 7 of this report shows the theoretical turbine visibility from some areas within Thorpdale. The SAA model is based on high-level contour information and does not include small changes in topography, buildings or vegetation.

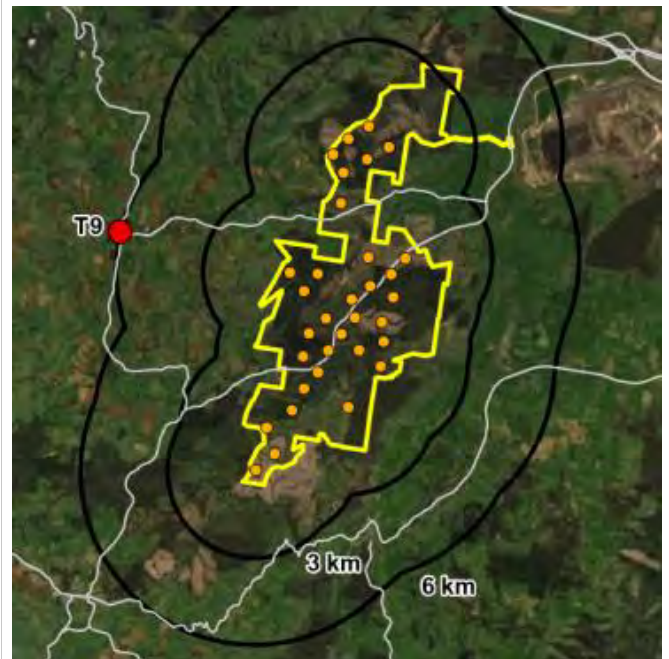


Figure 8-109: Viewpoint T9 – Existing view looking from Station Street within the centre of Thorpdale

Figure 8-110 shows the existing view looking east from Hamilton Street at the eastern edge of the town.



Figure 8-110: Viewpoint T9 – Existing view looking east from Hamilton Street

Figure 8-111 shows a wireframe view of the “Concept Layout” (v1.5, being 53 wind turbines). These earlier wireframe views demonstrated that from this elevated location to the east of Thorpdale and at this the turbines would be screened by topography and vegetation. Although the project layout has changed, turbines have not been added to this view, nor have turbines moved closer to this viewing location. For this reason, the wireframe is still relevant to this view and this location and has not been updated.



Figure 8-111: Viewpoint T9 – Wireframe Concept Layout (V1.5, being 53 wind turbines)

Figure 8-112 shows an enlargement of wireframe view focussing on the location of the proposed turbines.

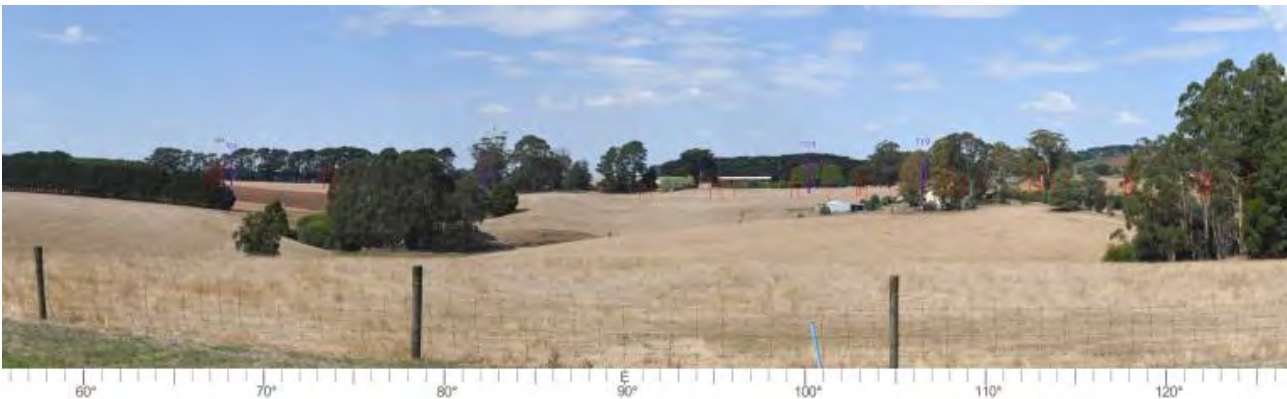


Figure 8-112: Enlargement Viewpoint T9 – Wireframe Concept Layout (V1.5, being 53 wind turbines)

Views within Thorpdale township will be filtered or completely screened by existing topography, vegetation and buildings.

For these reasons, the overall visual impact would be **Negligible** where part of the turbine may be visible to **Nil**.

VIEWPOINT T9 – THORPDALE		
Distance	6.0km east (T24)	Highly visible and will usually dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE - NIL	

8.6.10 Viewpoint T10 – Narracan

Narracan is a low-lying village located amongst extensive canopy trees to the north-western end of the Project. The SAA model discussed in Section 7 of this report demonstrated little to no turbine visibility from areas within Narracan.

The nearest turbine (T05) is approximately 2.8 km to the east.

Figure 8-113 shows the view looking east through roadside vegetation from Coalville Road, situated to the northeast of Narracan. This view is through one of the few locations where there is a clear break in vegetation that permits views across the landscape.

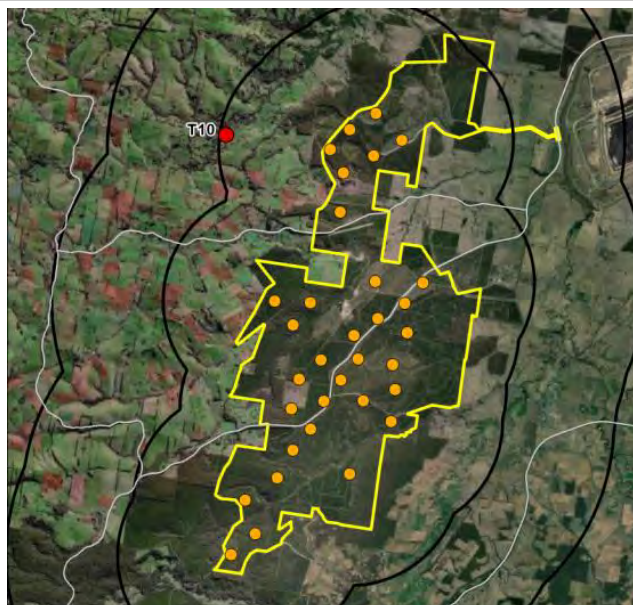


Figure 8-113: Viewpoint T10 – Existing view looking east from Coalville Road

Views from of the Project from the majority of locations within Narracan will be filtered or screened by either topography, roadside vegetation or both. Turbines may be visible from locations from the east-facing hillsides along the western side of the village.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT T10 – NARRACAN		
Distance	2.8km east (T05)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE - NIL	

8.6.11 Viewpoint T11 – Coalville

Coalville is a small residential cluster located towards the north-western edge of the project. The locality is situated on the lower north facing slopes below the same hills on which the Project is proposed.

Viewpoint T11 is located on Coalville Road roughly central to the locality of Coalville.

The nearest turbine (T04) is approximately 2.2 km south-east.

Figure 8-114 shows the view looking south-east from the side of Coalville Road.

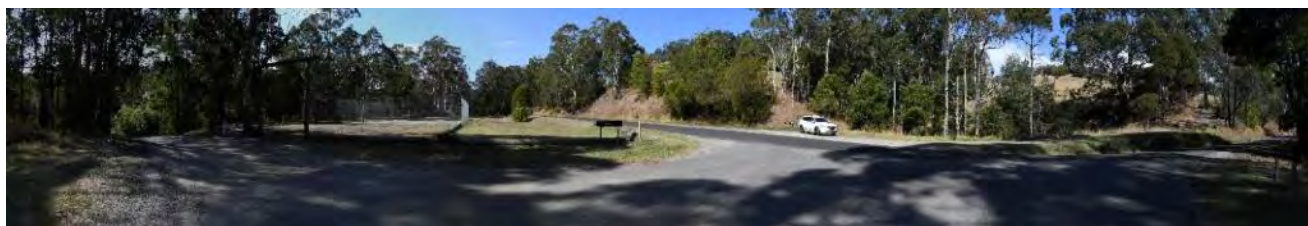
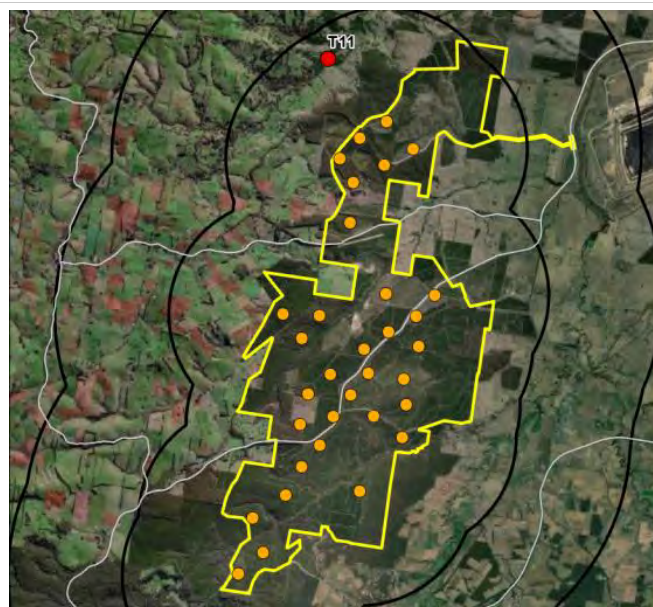


Figure 8-114: Viewpoint T11 – Existing view looking south-east

Coalville township is covered by the Significant Landscape Overlay (SLO1). SLO1 seeks to, amongst other things protect the landscape form of the Strzelecki Range and the rural landscape from insensitively designed development and to protect them and the surrounding landscapes from visual intrusion and inappropriate development.

Views from this location will be predominantly filtered or screened by topography and existing vegetation. There may be viewing opportunities for glimpses to turbines where breaks in vegetation allow. Where visible, the turbines would not be dominant features due to the scale and extent of vegetation in most views towards the Project.

This may vary from some residential dwellings where breaks in vegetation have been created to take in specific views or aspects. Views from these locations would be considered in a more detailed assessment should they be of concern to the individual owners.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT T11 – COALVILLE		
Distance	2.2km south-east (T04)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE-NIL	

8.6.12 Viewpoint T12 – Moe

Viewpoint T12 is located in Moe.

The nearest turbine (T03) is approximately 8.8 km south.

The SAA demonstrates theoretical visibility for the nacelle and above of approximately 9 turbines.

Figure 8-115 shows the view looking south across the trainline to east of the Moe train station. This location was selected as it is slightly elevated, roughly central to the town and include the elevated and vegetated hills at the northern end of the Project.

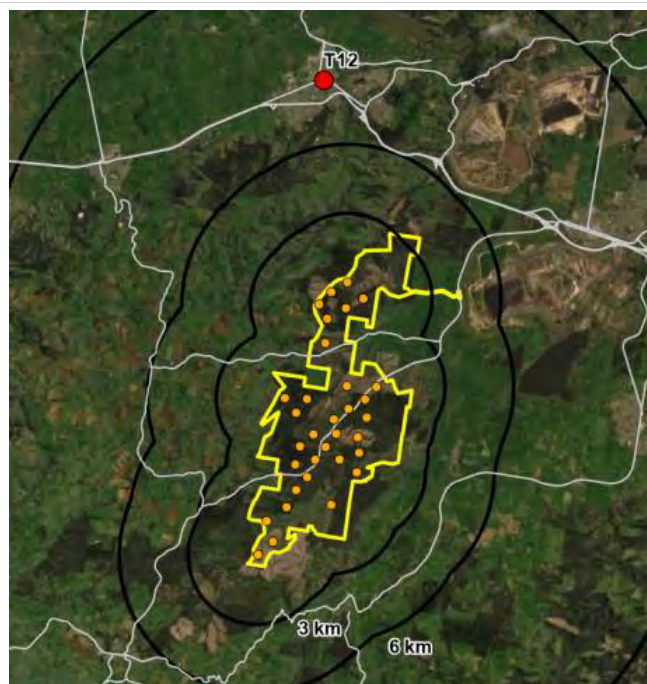


Figure 8-115: Viewpoint T12 – Existing view looking south across the train line in Moe township

Views from within town will be predominantly screened by buildings, vegetation and infrastructure within the township.

Figure 8-116 shows the view looking south along Coalville Road towards the southern edge of Moe. This viewing location is approximately 7.0 km from the nearest wind turbine (T03).



Figure 8-116: Viewpoint T12 – Existing view looking south on Coalville Road

Views from the outskirts on this side of town are also likely to be screened by existing topography, vegetation, buildings and infrastructure.

The SAA model indicated visibility of up to 9 turbines from areas within the township of Moe. Actual visibility would be limited to few locations where breaks in vegetation, buildings and other structures allow views to the south and towards the Project.

For these reasons, the overall visual impact would be **Low-Negligible**.

VIEWPOINT T12 – MOE		
Distance	8.8km south (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	LOW-NEGLIGIBLE	

8.6.13 Summary of Township Viewpoints

One of the key considerations of the Victorian Wind Farm guidelines is the potential for impacts on nearby communities and town centres. This section has reviewed locations and views from the 12 defined townships and localities within the project views. These assessments are supported by the mapping prepared by the SAA in Section 7 of this report, views from within and around the townships, photomontages, wireframe views and virtual reality imagery. The overall visual impact from these areas is considered to low-negligible as shown in the summary table below. It is recognised that there may be locations where the visual impact may be moderate or even high, however from this analysis, these locations would be few and would not elevate the overall visual impact which considers that range and predominant available views.

Table 8-10 Summary of views from townships

VP	Location	Nearest Turbine Rev 3.4	Visual Impact
T1	Yallourn	13km SW (T03)	Negligible-Nil
T2	Tyers	21km SW (T01)	Negligible
T3	Traralgon	23km SW (T01)	Negligible
T4	Churchill	11.6km W (T16)	Negligible
T5	Morwell	10.2km SW (T01)	Negligible
T6	Yinnar	4.0km W (T14)	Low
T7	Boolarra	3.8km NW (T29)	Low- Negligible
T8	Mirboo North	7.3km NE (T33)	Low- Negligible
T9	Thorpdale	6.0km E (T24)	Negligible - Nil
T10	Narracan	2.8km E (T05)	Negligible-Nil
T11	Coalville	2.2km SE (T04)	Negligible-Nil
T12	Moe	8.8km S (T03)	Low-Negligible
OVERALL VISUAL IMPACT – TOWNSHIPS			LOW-NEGLIGIBLE

Views from most locations within the nearby towns and locality will be filtered or screened by a combination of topography, vegetation or buildings and other structures.

Views are typically limited to the edges of townships or areas such as recreation reserves that allow for clear views over large open areas. Where visible, the turbines would not be dominant features due to the scale and extent of vegetation in most views towards the Project.

As stated above, there may be views from residential dwellings where breaks in vegetation have been created to take in specific views or aspects.

8.7 Recreational trails, parks and elevated lookouts

Thirteen viewpoint locations (RT1a-c-RT11) have been selected as representative of views from recreational trails within the viewshed of the Project. Viewer numbers from recreational trails would be assessed as low while the landscape sensitivity would vary dependant on the location of the viewpoint.

It is a requirement of the Victorian Wind Farm Guidelines set out in 52.32 Wind Energy Facility to consider the potential for impacts on views and amenity from significant conservation and recreation areas, water features, tourist routes and walking tracks. This section will review the views and visual impact from 11 such locations within the project viewshed.

The location of each viewpoint in proximity to the project is shown in Figure 8-117.

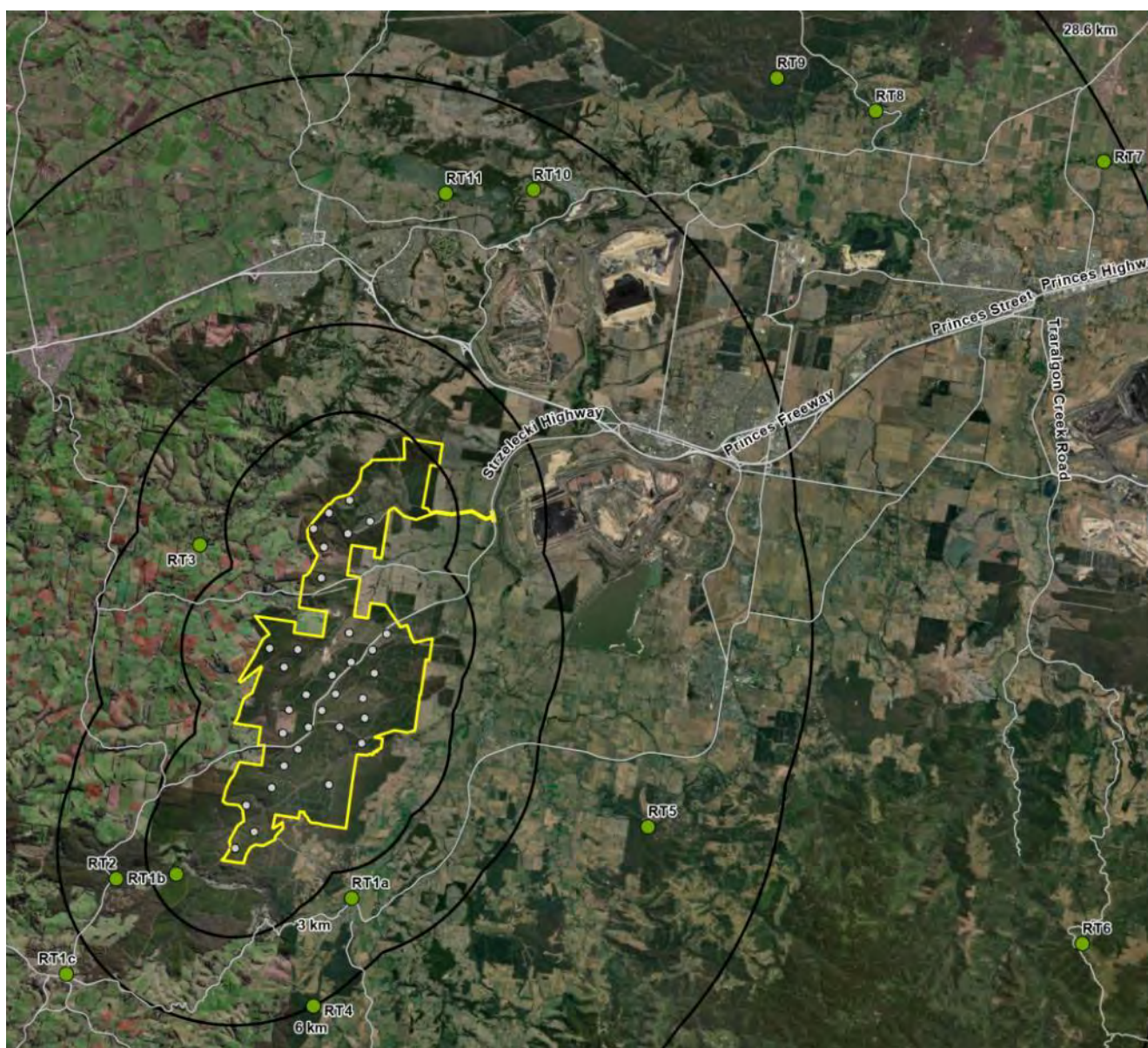


Figure 8-117: Parks and Recreation Trails Viewpoint Locations Map

The viewpoint, GPS co-ordinates, distances to the nearest wind turbine and landscape unit in views towards the Project are described in Table 8-11.

Table 8-11: Parks and Recreation Trails Viewpoint Locations

VP	Location	GPS Co-ordinates	Nearest Turbine Rev 3.4	Landscape Unit
RT1a	GR Trail – Boolarra	55H 436593, 5752000	3.9km NW (T29)	Unit 1a
RT1b	GR Trail – Darlimurla	55H 430622, 5752820	2.1km NE (T33)	Unit 4a
RT1c	GR Trail – Mirboo North	55H 426878, 5749416	7.1km NE (T33)	Unit 1a
RT2	Lyrebird Forest Walk	55H 428577, 5752665	4.1km NE (T33)	Unit 6
RT3	Narracan Falls	55H 431424, 5764042	3.9km NE (T05)	Unit 5
RT4	Mirboo North Regional Park	55H 435288, 5748327	5.9km NW (T33)	Unit 6
RT5	Morwell National Park	55H 446681, 5754434	10.1km NW (T19)	Unit 6
RT6	Mt Tassie Lookout	55H 461476, 5750450	25.4km NW (T19)	Unit 6
RT7	Gippsland Plains Rail Trail	55H 462208, 57774103	27.7km SW (T01)	Unit 5
RT8	Tyers Lookout	55H 454438, 577821	22.1km SW (T01)	Unit 3
RT9	Petersons Lookout Tyers Park	55H 451075, 5779943	20.5km SW (T03)	Unit 6
RT10	Howlett Road Lookout	55H 442790, 5776135	12.3km SW (T03)	Unit 3
RT11	Lake Narracan	55H 439801, 5776015	10.9km S (T03)	Unit 5

8.7.1 Viewpoint RT1a – Grand Ridge Trail Boolarra

Viewpoint RT1a is located at Boolarra entrance to the Grand Ridge Trail.

The nearest turbine (T29) is approximately 3.9km north-west.

Figure 8-118 shows the view looking south towards the trail entrance from the carpark at Christian Street Boolarra.

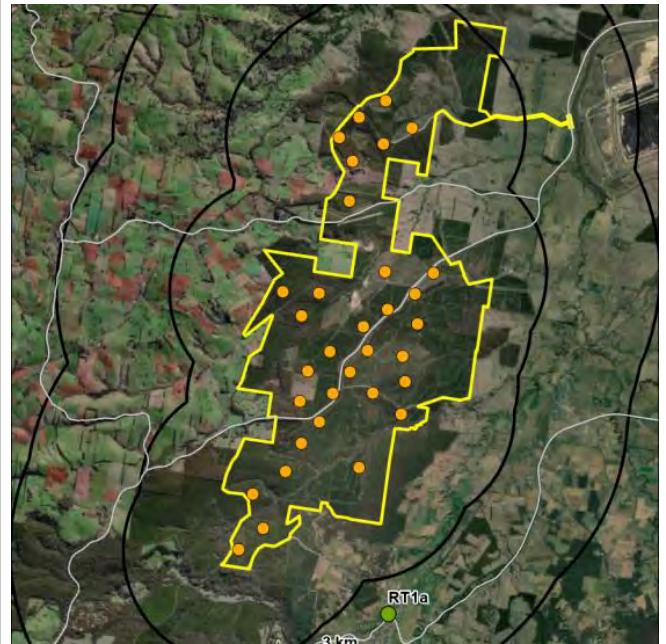


Figure 8-118: Viewpoint RT1a – existing view looking south-west

Figure 8-119 shows the view looking generally south-west to northwest from Christian Street through a break in existing trees. This view has been taken along Christian Street where visibility towards the Project is afforded by the alignment of the road.



Figure 8-119 View looking southwest to northwest

Views towards the turbines from the reserve and trail entrance will be filtered or screened by existing vegetation within the reserve, roadsides and private allotments. Views to the nearer turbines directly to the west will be screened by the vegetated hill directly to the west of the town.

Views further to the south, from the entrance to the trail and within the Reserve would be filtered by vegetation along the Duke Street road reserve and from within the Reserve itself.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT RT1a – GRAND RIDGE TRAIL BOOLARRA		
Distance	3.9km north-west (T29)	Highly visible and will usually dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Township	Moderate
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.7.2 Viewpoint RT 1b – Grand Ridge Trail Darlimurla

Viewpoint RT1b is located at the former Darlimurla Station roughly midway along the Grand Ridge Trail. The former station site is now a rest stop and interpretive centre.

The nearest turbine (T33) is approximately 2.1km northeast.

Figure 8-120 shows the layout and setting of the trail stop which includes shelters, a grassed terrace and picnic tables.

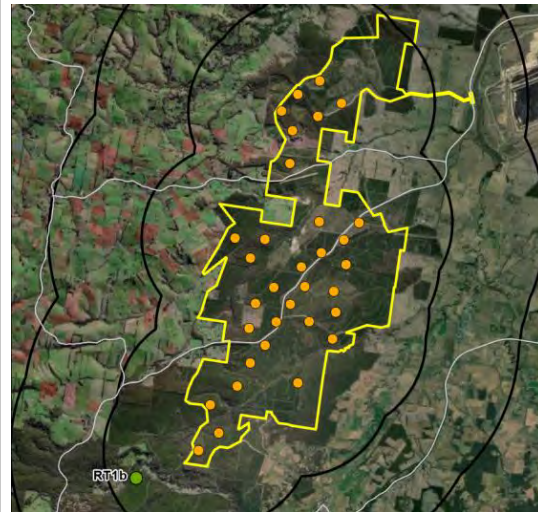


Figure 8-120: Viewpoint RT1b – existing view looking south towards the Rail Trail

Figure 8-121 shows the view looking north towards the proposed turbines from the upper terrace of the Darlimurla Station rest stop.



Figure 8-121 View looking north

Existing vegetation in the landscape to the north will filter most views towards the proposed wind turbines. Although there will be limited turbine visibility from the rest stop.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT1b – GRAND RIDGE TRAIL DARLIMURLA		
Distance	2.1km northeast (T33)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLIGIBLE-NIL	

8.7.3 Viewpoint RT1c – Grand Ridge Trail Mirboo North

Viewpoint RT1c is located at the western side of the Strzelecki Highway crossing of the Grand Ridge Trail in Mirboo North.

The nearest turbine (T33) is approximately 7.1km northeast.

Figure 8-122 shows the view looking generally east from the rail trail crossing at east of the Strzelecki Highway.

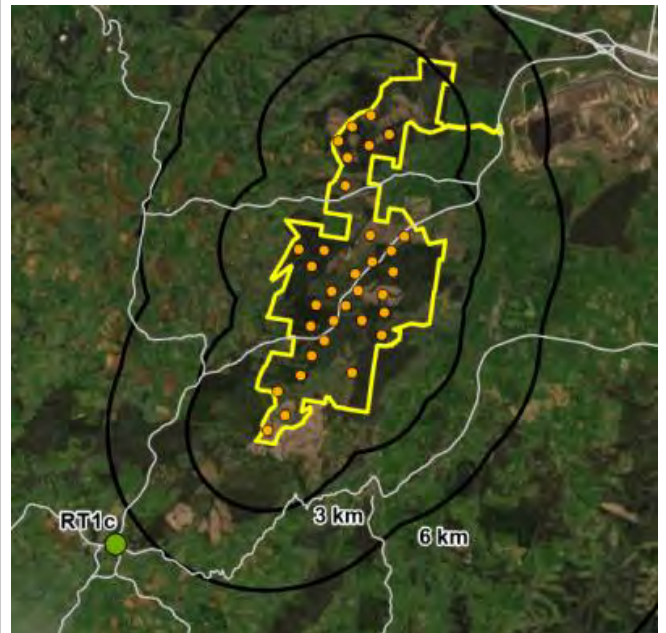


Figure 8-122: Viewpoint RT1c – existing view looking east

Figure 8-123 shows the view looking generally north from the rail trail. There is a small carparking and grassed area, seating and picnic tables.



Figure 8-123 View looking north – northwest

Views towards the proposed turbines are through existing trees within the trail reserve, surrounding road network and private allotments.

The Grand Ridge Brewery is directly to the south of this location and the Mirboo North trail sits within a vegetated cutting at this point. It is unlikely that there will be any turbines visible from this location.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT1c – GRAND RIDGE TRAIL MIRBOO NORTH		
Distance	7.1km northeast (T33)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU1a – Townships	Moderate
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE - NIL	

8.7.4 Viewpoint RT2 – Lyrebird Forest Walk

Viewpoint RT2 is located at the entrance and carparking area of the Lyrebird Forest Walk.

The nearest turbine (T33) is approximately 4.1km northeast.

The trail start comprises a small car parking area, picnic tables and chairs and interpretive signage.

Figure 8-124 shows the view from the car parking area looking generally northeast towards the trail entrance.

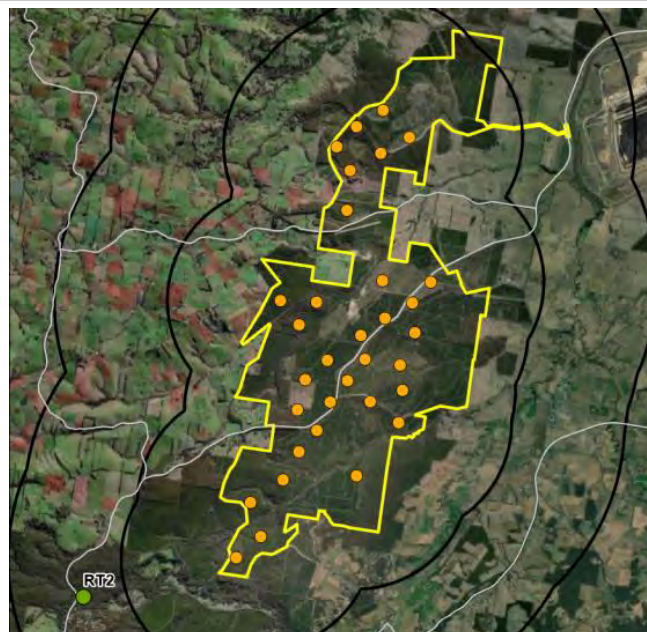


Figure 8-124: Viewpoint RT2 – existing view looking northeast

The majority of the Lyre Bird Walk is set within the mature forests of the Mirboo North Regional Park. Most views towards the wind farm would be filtered or screened by topography and vegetation.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT2 – LYREBIRD FOREST WALK		
Distance	4.1km northeast (T33)	Highly visible and will usually dominate the landscape
Landscape Unit	LU6 – National and State Parks	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLEGIBLE-NIL	

8.7.5 Viewpoint RT3 - Narracan Falls

Viewpoint RT3 is located at Narracan Falls off Falls Road.

The nearest turbine (T05) is approximately 3.9km northeast.

Figure 8-125 shows the view looking east from the Narracan Falls Carpark.

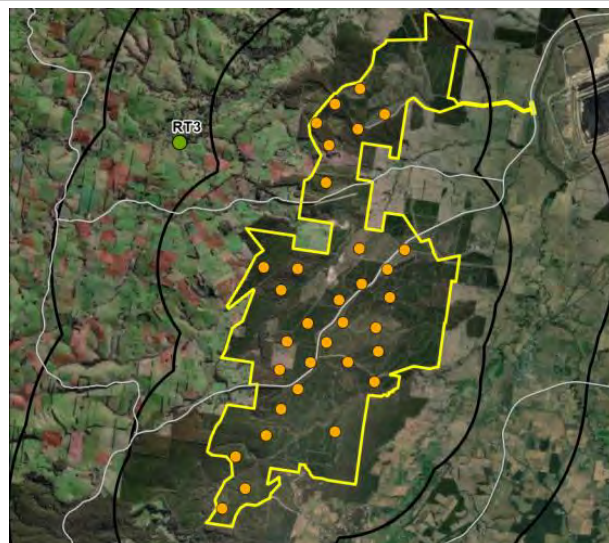


Figure 8-125: Viewpoint RT3 – Existing view looking east

Figure 8-126 shows a view of the falls.



Figure 8-126: Viewpoint RT3 – Existing view of the falls

There is the potential for the tips and upper sections of several turbines located in the southern section of the wind farm to be visible from the carpark to the Narracan Falls. As you move towards the falls themselves, topography and vegetation will screen views to the turbines.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT3 – NARRACAN FALLS		
Distance	3.9km northeast (T05)	Highly visible and will usually dominate the landscape
Landscape Unit	LU5 – Lakes and Waterways	High
Viewer Numbers	Trail	Low

OVERALL VISUAL IMPACT	NEGLIGIBLE-NIL
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8.7.6 Viewpoint RT4 - Mirboo North Regional Park

Viewpoint RT4 is located in the Mirboo North Regional Park off Barktown Road.

The nearest turbine (T33) is approximately 5.9km north-west.

Figure 8-127 shows the view looking north-west from within the Mirboo North Regional Park.

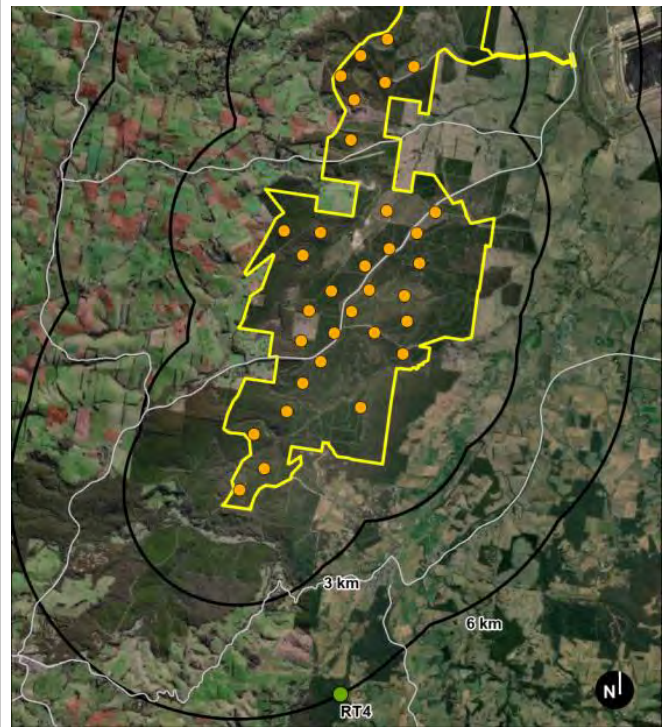


Figure 8-127: Viewpoint RT4 – Existing view looking north-west

Viewpoint RT4 is taken from the dirt road that runs through the Mirboo North Regional Park. There are not many vantage points or stopping areas. Most views towards the wind farm would be filtered or screened by the dense vegetation of the park.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT4 – MIRBOO NORTH REGIONAL PARK		
Distance	5.9km south (T33)	Highly visible and will usually dominate the landscape
Landscape Unit	LU6 – National and State Parks	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE-NIL	

8.7.7 Viewpoint RT5 - Morwell National Park

Viewpoint RT5 is located within the Morwell National Park off Kerry Road.

The nearest turbine (T19) is approximately 10.1km north-west.

Figure 8-128 shows the view looking north-west from within the Morwell National Park.

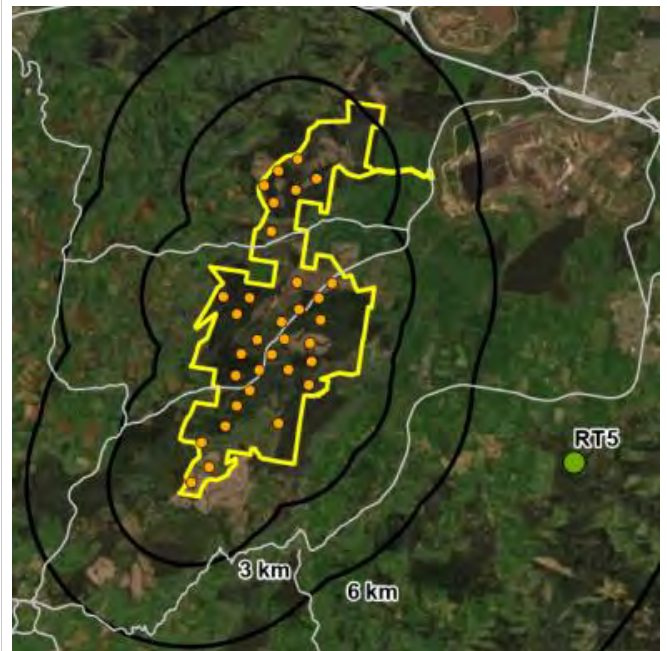


Figure 8-128: Viewpoint RT5 – Existing view looking north-west

Viewpoint RT5 is taken from the carpark and entrance to the Morwell National Park. Most views towards the wind farm would be filtered or screened by topography and vegetation as seen in Figure 8-128.

For these reasons, the overall visual impact would be **Negligible-Nil**.

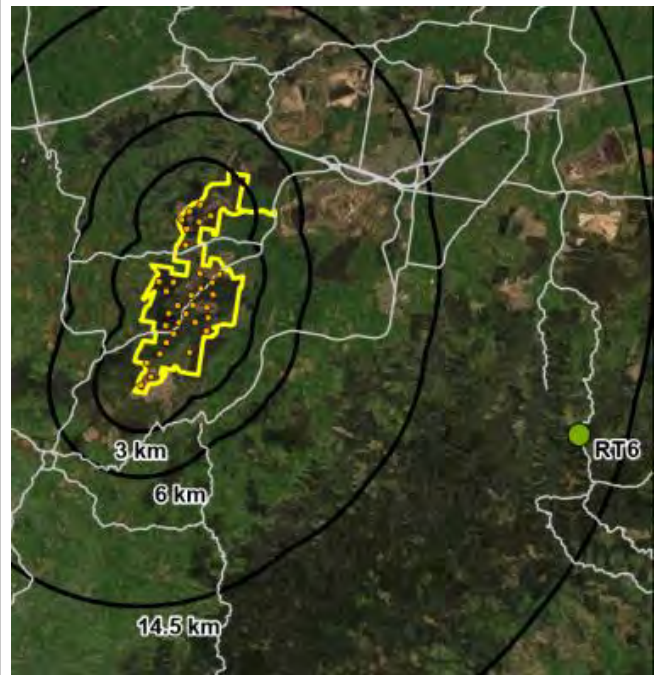
VIEWPOINT RT5 – MORWELL NATIONAL PARK		
Distance	10.1km north-west (T19)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU6 – National and State Parks	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE-NIL	

8.7.8 Viewpoint RT6 - Mt Tassie Lookout

Viewpoint RT6 is located at the Mt Tassie Lookout off Traralgon-Balook Road.

The nearest turbine (T19) is approximately 25.4km north-west.

Figure 8-130 shows the view looking north-west from the Mt Tassie Lookout.



Views to the south and entrance to Mt Tassie also include multiple telecommunications facilities as seen in Figure 8-129. These elements can also be seen from many of the lower-lying areas closer to the project.



Figure 8-129: Viewpoint RT6 – Existing telecommunications towers



Figure 8-130: Viewpoint RT6 – Existing view looking north-west.

Views from Mt Tassie include the remaining coal-fired power stations, modifications to the landscape and associated development which include open-cut coal mines, plant and infrastructure. Views from this location towards the project can be influenced by atmospheric considerations including cloud cover and fog as well as steam from the several operating power station.

Views transition from the elevated hills, to agricultural areas within the lower areas of the Morwell River through to vegetated plantations and more natural areas of state forest to the south and beyond.

In this context, the area in which the Project is located whilst elevated in topography is in context to the Strzelecki Ranges and the more elevated and vegetated hills around Mt Baw Baw to the north and is not an obvious element in the view.

The Project site is lower lying and less topographically dramatic. In this context and in these views, whilst visible the Project would be Low-Negligible.

At a distance of approximately 25.4km the turbines may be discernible on a clear day. They would not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT RT6 – MT TASSIE LOOKOUT		
Distance	25.4km north-west (T19)	Discernible, but will not be dominant in views
Landscape Unit	LU6 – National and State Parks	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.7.9 Viewpoint RT7 - Gippsland Plains Rail Trail

Viewpoint RT7 is located on the Gippsland Plains Rail Trail where the bridge crosses the Latrobe River.

The nearest turbine (T01) is approximately 27.7km south-west.

Figure 8-131 shows the view looking south-west from the bridge as is crossing the Latrobe River.

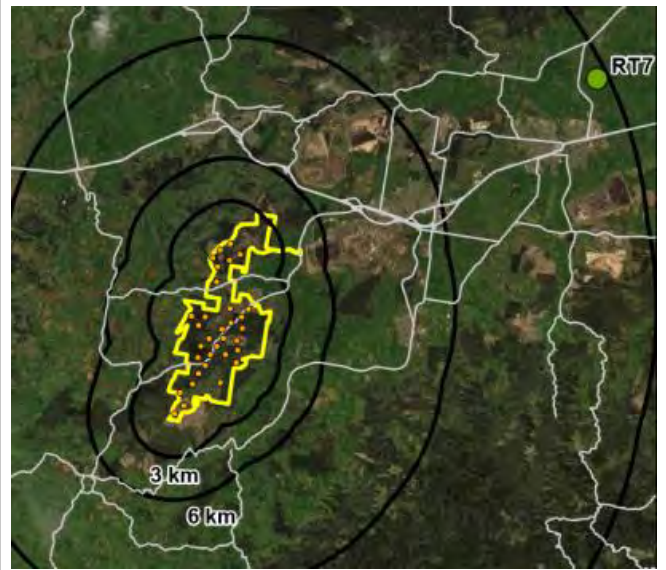


Figure 8-131: Viewpoint RT7 – Existing view looking south-west

Figure 8-132 shows a view closer to Traralgon with clear views towards the Project.



Figure 8-132: Viewpoint RT7 – Existing view looking south-west

This viewpoint is taken from the Gippsland Plains Rail Trail as it heads south towards Traralgon and aligns views towards the Project.

Due to the flat nature of the viewing location and at a distance of approximately 27.7km it is unlikely the turbines would be visible. If discernible on a clear day they would not be a dominant element in the view. Where the trail gets closer to Traralgon and therefore closer to the Project the limited screening vegetation would allow clear views towards the Project. However, these views also include the Coal Fire Power Plant seen central to Figure 8-132 and at a distance of approximately 27.5km would still not be a dominant element in the view.

For these reasons, the overall visual impact would be **Negligible-Nil**

VIEWPOINT RT7 – GIPPSLAND PLAINS RAIL TRAIL		
Distance	27.7km south-west (T01)	Discernible, but will not be dominant in views
Landscape Unit	LU5 – Lakes and Waterways	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE-NIL	

8.7.10 Viewpoint RT8 – Tyers Lookout

Viewpoint RT8 is located at Tyers Lookout on Walhalla Tyers Road.

The nearest turbine (T01) is approximately 22.1km south-west.

Figure 8-133 shows the view looking south from Tyers Lookout on Walhalla Tyers Road.

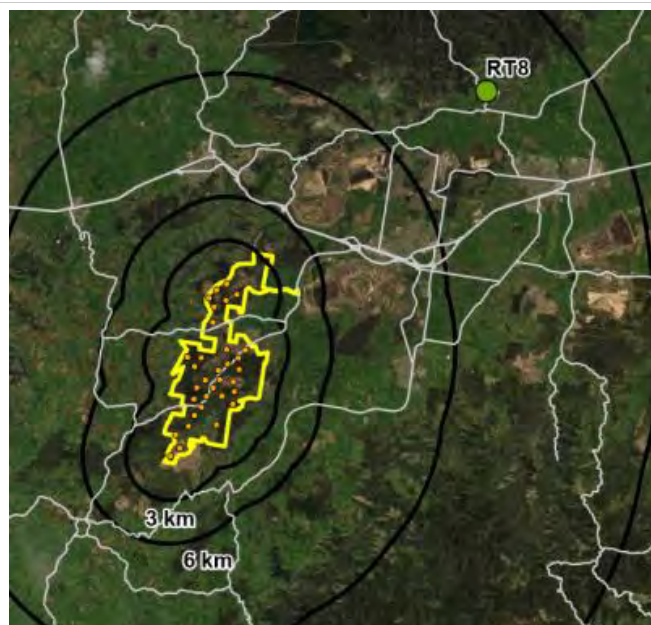


Figure 8-133: Viewpoint RT8 – Existing view of Open Cut Lookout

Viewpoint RT8 is taken from an elevated lookout and rest stop on Walhalla Tyers Road. The elevated vantage point clear of vegetation allows for clear views towards the Project.

This view also includes the remaining coal fired power stations and the resultant modifications to the landscape which include open cut coal mines, plant and infrastructure as well as the atmospheric changes (smoke/steam). Views transition to the agricultural uses in the lower areas of the Morwell River and to the vegetated hills in the background which the turbines will sit.

At a distance of 22.1km the turbines may be discernible however they will not be a dominant in views.

For these reasons, the overall visual impact would be **Negligible-Nil**.

VIEWPOINT RT8 – TYERS LOOKOUT		
Distance	22.1km south-west (T01)	Discernible, but will not be dominant in views
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Major Road	Moderate
OVERALL VISUAL IMPACT	NEGLEGIBLE-NIL	

8.7.11 Viewpoint RT9 - Petersons Lookout – Tyers Park

Viewpoint RT9 is located at Petersons Lookout in Tyers Park.

The nearest turbine (T03) is approximately 20.5km south-west.

The lookout is accessed via a short walk from a small car parking area accessed via a narrow gravel track from the Tyers-Walhalla Road to the north.

Figure 8-134 shows the context of the existing view looking from Petersons Lookout.

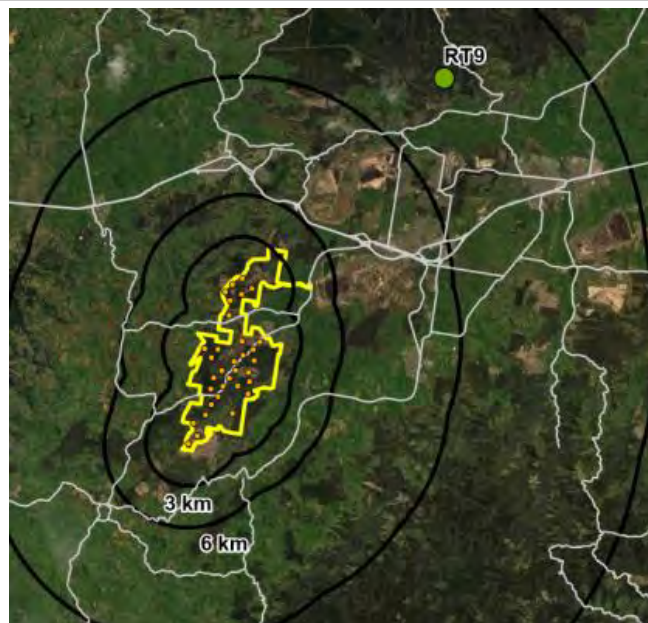


Figure 8-134: Viewpoint RT9 – Existing view looking south

Figure 8-135 shows an enlargement of the view looking south-west towards the project.



Figure 8-135: Viewpoint RT9 – Enlargement

Views from the lookout take in the foothills to the north of the Latrobe Valley, the power stations and associated infrastructure iconic of the Valley and interspersed with farmland and nearby towns. Views to the west and away from the project include Tyers Gorge and Tyers River below a backdrop of steep forested slopes and limestone crags.

Where visible, the turbines would be located in the background of views and behind the existing power stations, open-cut coal mines farmland and nearby towns. Due to distance and other changes in the view, the visual impact of the project would be negligible. For some viewers, the presence of turbines in this view may be perceived as a positive change.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT RT9 – PETERSONS LOOKOUT TYERS PARK		
Distance	20.5km south-west (T03)	Discernible, but will not be dominant in views
Landscape Unit	LU6 – National and State Parks	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.7.12 Viewpoint RT10 – Howlett Road Lookout

Viewpoint RT10 is located at the Howlett Road Lookout. Passed this point the road is closed to the public.

The nearest turbine (T03) is approximately 12.3km south-west.

Figure 8-136 shows the view looking south from Howlett Road Lookout.

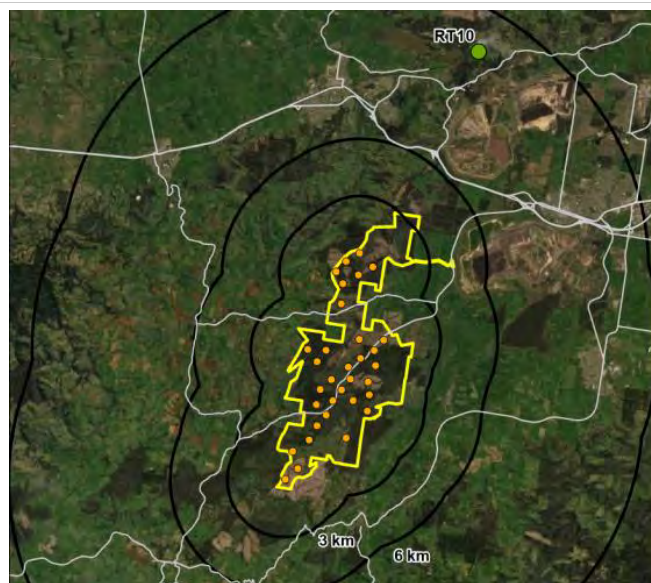


Figure 8-136: Viewpoint RT10 – Existing view of Howlett Road Lookout

Viewpoint RT10 is taken from the elevated lookout point at the end of Howlett Road. Howlett Road is truncated beyond this and not publicly accessible. There is not an official lookout stop, however, there are clear views over the existing coal fire power plant towards the vegetated hills in which the Project is located.

At a distance of approximately 12.3km, the turbines have the potential to be a noticeable element, however, they will not be a dominant element in this view across a landscape that is not sensitive to visual change and is viewed by few road users.

For these reasons, the overall visual impact would be **Negligible**.

VIEWPOINT RT10 – OPEN CUT LOOKOUT		
Distance	12.3km south-west (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU3 – Industrial/Mining	Low
Viewer Numbers	Local Road	Low
OVERALL VISUAL IMPACT	NEGLECTIBLE	

8.7.13 Viewpoint RT11 - Lake Narracan

Viewpoint RT11 is located at Lake Narracan off S Shore Road, near the boardwalk.

The nearest turbine (T03) is approximately 10.9km south-west.

Figure 8-137 shows the view looking north towards Lake Narracan from the carpark.

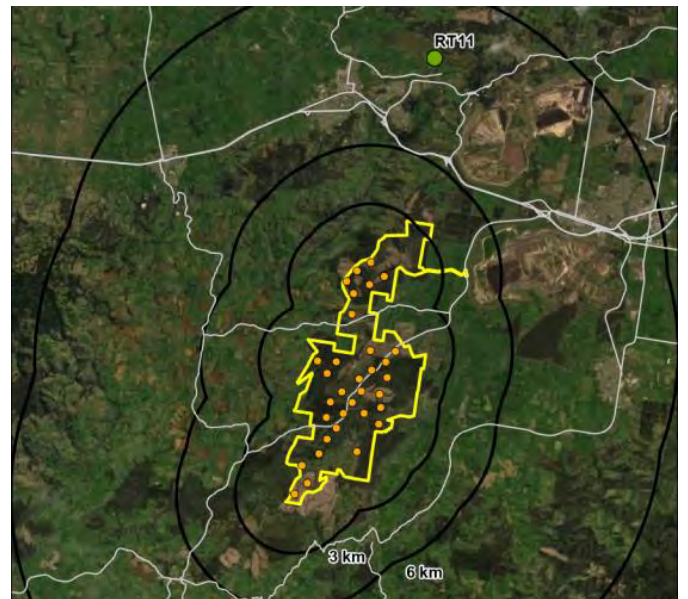


Figure 8-137: Viewpoint RT11 – Existing view of Lake Narracan

Figure 8-138 shows the existing view of the lake from the boardwalk area.



Figure 8-138: Viewpoint RT11 – Existing view of Lake Narracan

Figure 8-139 shows the view looking south from the Narracan Waterski Club.



Figure 8-139: Viewpoint RT11 – Existing view of Lake Narracan from the Narracan Waterski Club

Theoretical visibility of up to 8 turbines for some parts of the Lake edge to the south. Most of these locations are focused in the other direction towards the lake and away from the turbine.

Intervening vegetation, topography and built form will likely filter or screen views to the turbines. If visible they would not be a dominant feature in the view.

For these reasons, the overall visual impact would be **Nil**.

VIEWPOINT RT11 – LAKE NARRACAN		
Distance	10.9km south-west (T03)	Potentially noticeable and can dominate the landscape
Landscape Unit	LU5 – Lakes and Waterways	High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	NIL	

8.7.14 Summary of Recreational Trail Viewpoints

Table 8-12 summarises the overall visual impact from recreational trails and lookouts.

Table 8-12 Summary of views from Recreational Trails and lookouts

VP	Location	Nearest Turbine Rev 3.4	Visual Impact
RT1a	GR Trail – Boolarra	3.9km NW (T29)	Negligible-Nil
RT1b	GR Trail – Darlimurla	2.1km NE (T33)	Negligible-Nil
RT1c	GR Trail – Mirboo North	7.1km NE (T33)	Negligible-Nil
RT2	Lyrebird Forest Walk	4.1km NE (T33)	Negligible-Nil
RT3	Narracan Falls	3.9km NE (T05)	Negligible-Nil
RT4	Mirboo North Regional Park	5.9km NW (T33)	Negligible-Nil
*T5	Morwell National Park	10.1km NW (T19)	Negligible-Nil
RT6	Mt Tassie Lookout	25.4km NW (T19)	Negligible
RT7	Gippsland Plains Rail Trail	27.7km SW (T01)	Negligible-Nil
RT8	Tyers Lookout	22.1km SW (T01)	Negligible-Nil
RT9	Petersons Lookout Tyers Park	20.5km SW (T03)	Negligible
RT10	Howlett Road Lookout	12.3km SW (T03)	Negligible
RT11	Lake Narracan	10.9km S (T03)	Nil
OVERALL VISUAL IMPACT – RECREATIONAL TRAILS			NEGLIGIBLE

There are many kilometres of recreational trails within the viewshed and areas that immediately surround the project and include walking tracks, cycling routes and rail trails.

Outside of towns and built-up areas, walking trails tend to be located in heavily vegetated areas such as the Lyrebird Forest Walk, Morwell National Park and the trail to Petersons Lookout. Views along these trails tend to be confined views to the trail and immediate vicinity by the extensive canopy vegetation and supporting bushland.

Rail trails comprise well-made paths, gentle grades and the ability to cover considerable distances for walkers, running and cycling. The Grand Ridge Rail Trail runs along part of the eastern and southern boundaries of the site between Boolarra and Mirboo North. Many views from the trail are filtered or screened by topography, vegetation or a combination of both. The Gippsland Plains Rail trail further to the north provide wide, open and long-distance views over large areas of cleared flat farmland. When looking towards the Delburn Wind Farm from many locations along Gippsland Plains Rail trail, views include operating power stations, powerline infrastructure and many other constructed elements. The turbines would be visible; however, they would be at such a distance and in a context that they would not be visually dominant features. There will be locations where

views to the turbines are possible where a break or gap in vegetation permits. Turbine visibility would form part of the dynamic views afforded along the trail. There will be limited to no views from key trail locations such as entrances or designated stops.

Views from elevated locations such as Mt Tassie to the south-east, Tyers and Petersons lookout to the north enable long views over the Latrobe Valley. In most directions, views include a tapestry of cleared farmland, towns and developed areas, coal-fired power stations and the open-cut coalmines within the valley and supported by a backdrop of vegetated hills and plantation forests.

Further, views from elevated lookouts are often modified by atmospheric conditions that can limit or filter long views.

For these reasons, the overall visual impact of Recreational Trail Viewpoints is assessed as Negligible.

8.8 Summary of publicly accessible locations

This section assessed the potential for changes in views and visual impact of the proposed Delburn Wind Farm from 79 publicly accessible locations selected within and around the project viewshed. Viewpoints were selected to consider the location of the proposed wind turbines from key vantage points, major roads, tourist routes, townships, local roads, parks and trails sufficient to give a sense of the Project and its setting following the requirements set out in clause 53.32 Wind Energy Facility of the VPP.

The 79 Viewpoints were grouped to assist with the assessment of areas set out in Clause 52.32 Wind Energy Facilities to allow for this consideration and discussion of views from townships and urban areas, significant conservation and recreation areas, National Parks and State forests, water features, tourist routes and walking tracks, major roads. The discussion of these views and the assessment of the overall visual impacts were supported by photographs relevant to each location, photomontages, wireframe views and virtual reality imagery.

This analysis has shown that the areas within the viewshed vary greatly from the lower-lying areas and plains around the Morwell River Valley to the east and north of the project and the elevated hills of the project site, the landscape to the south around the townships of Mirboo North and Darlimurla and the landscape to the west of the site.

Areas to the west are quite an intricate landscape comprised of steeply rolling and deeply incised hills. Plantations and roadside vegetation assist to reveal views across the landscape. Views from publicly accessible roads change rapidly as you move through and across the landscape. Road cuttings and embankments through to more natural elements such as rolling hills and vegetation assist to filter and screen views. There are few locations when travelling along roads in the west where there are views towards the Project for a long duration.

Locations to the north include many instances of transmission lines and other infrastructure, a reflection of the many coal fire power stations in the area. Further south the landscape transitions into a somewhat more natural setting, transitioning from a coal and power landscape through cleared farmlands and into vegetated hills including plantations and natural forest. Views from these forested areas further south are seen as more visually sensitive due to their natural appearance and vegetation cover. However, it is this same vegetation and undulating hills that assists to screen or filter views towards the turbines and hills that they will sit on.

The overall visual impact of the project would be generally low from major roads and tourist routes, townships and urban areas, significant conservation areas, reserves and trails.

9. Residential Viewpoints

Views and visual impacts from residential dwellings have the greatest potential for visual impacts to be brought about by the Project. The visual impact is in part one that can be assessed by discussing the number and scale of wind turbines in particular views, although the perceived visual impact is one that is influenced by the individual viewer. For this reason, the assessment of visual impact from residential properties differs from that undertaken from publicly accessible viewpoints.

For residential occupiers, the view to the wind turbines may not be just a glimpse or a 5-minute experience as they drive around the local road network, but potentially a permanent view from living areas or outside entertainment spaces of their homes. Landholders that farm the land may also be impacted as they work on their property. These areas, like other places of work, are not considered as sensitive as views from places of residence or attached private open space. The analysis of visual impact from residential properties is based on the following assumptions:

- An occupant of a residential dwelling will have a high degree of sensitivity to the change in their immediate landscape;
- Visitor numbers are not applicable to residences;
- Farmers may be able to see the wind turbines as they move around their property. These areas may be used as much in daylight hours as the living areas of their residences; and
- Landscape can be designed to mitigate the visual impact when located near a fixed viewpoint, such as a residence, with far greater ease than that can be achieved along the road network.

Figure 9-1 shows the SAA and residential dwellings within 6km of a turbine.

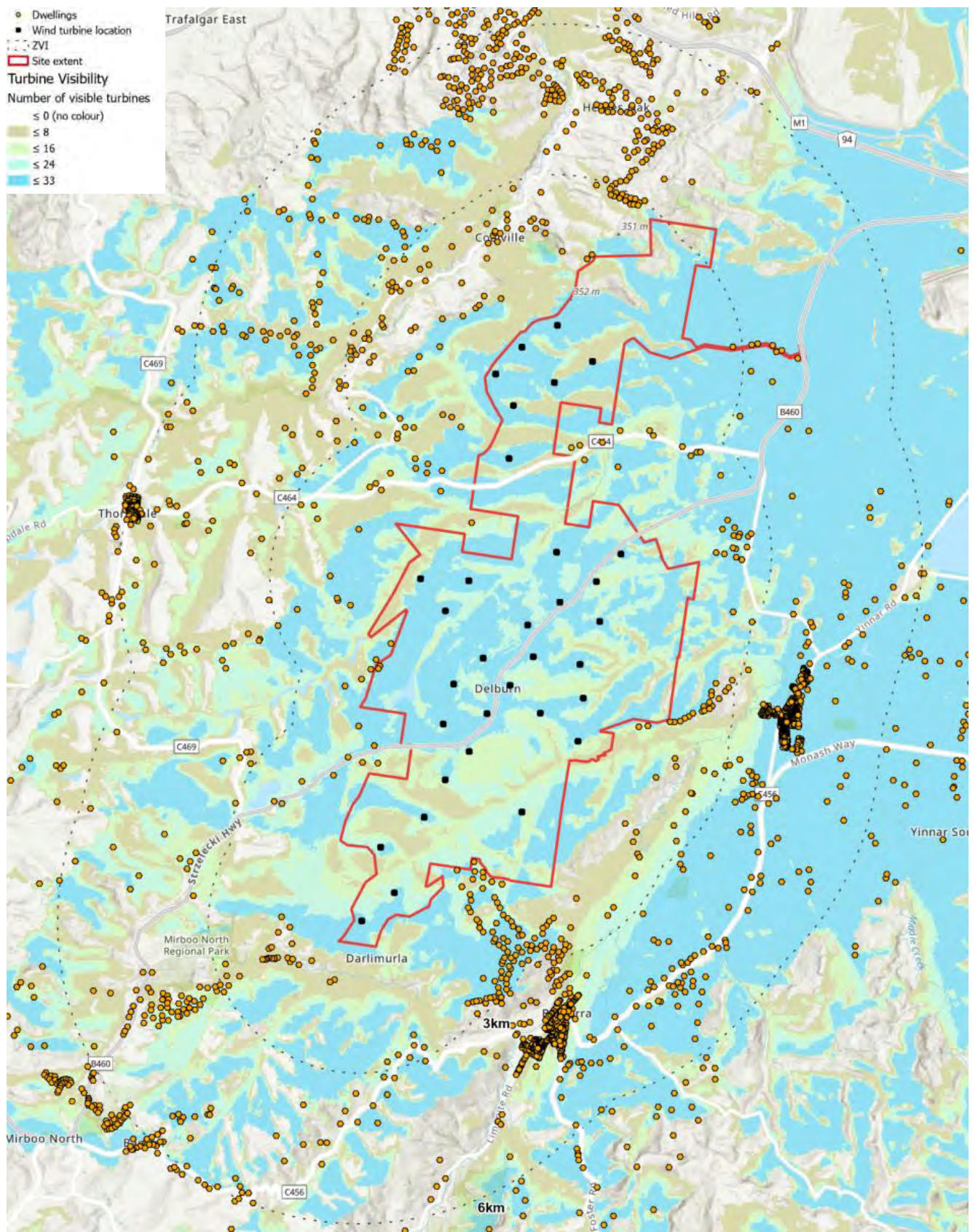


Figure 9-1: Residential dwellings within 6km of proposed turbines and theoretical visibility

The SAA shown above is a theoretical model that is based upon key Project infrastructure and the topography of the surrounding landscape. The SAA does not include features such as vegetation, buildings, structures or micro topographical changes that can also influence or alter or assist to screen or filter views.

The majority of the dwellings to the areas in the north-west, part of the west and south-west of the site are in areas where there is little to no theoretical turbine visibility. This is due to the topographical variation and diversity in these areas that comprises steep sided rolling hills with deeply incised valleys and flatter hilltops and ridgelines. In these areas residential dwellings and clusters tend to be set lower in the landscape and away from the elevated ridgelines.

Areas to the east of the Project which are set down in the low generally flat plains alongside the Morwell River have the greater potential for turbine visibility.

There are 1567 dwellings within 6.0km of a proposed turbine. The following table summarises the residential dwellings and their relative distance to the nearest turbine.

Table 9-1: Residential dwellings within 6.0km of a turbine

Distance to nearest turbine	Number of dwellings
1.0-2.0km	103
2.0-3.0km	214
3.0-4.0km	256
4.0-5.0km	694
5.0-6.0km	300*

*This data has not been confirmed in the field. Some of these structures may form sheds, structures or other buildings that are not dwellings and therefore not inhabited.

To assist with the visual assessment of residential dwellings, where appropriate these are discussed in clusters which for the purposes of this assessment. 7 distinct clusters can be determined by their proximity to the project. These are set out below.

North-eastern Residential Cluster

- Driffield and Hazelwood

Eastern Residential Cluster

- Yinnar and Yinnar South

South-eastern Residential Cluster

- Boolarra

South-western Residential Cluster

- Darlimurla, Mirboo North and Baromi

Western Residential Cluster

- Delburn and Thorpdale

North-western Residential Cluster

- Narracan and Coalville; and

Northern Residential Cluster

- Hernes Oak and Moe South.

Figure 9-2 shows these residential clusters.

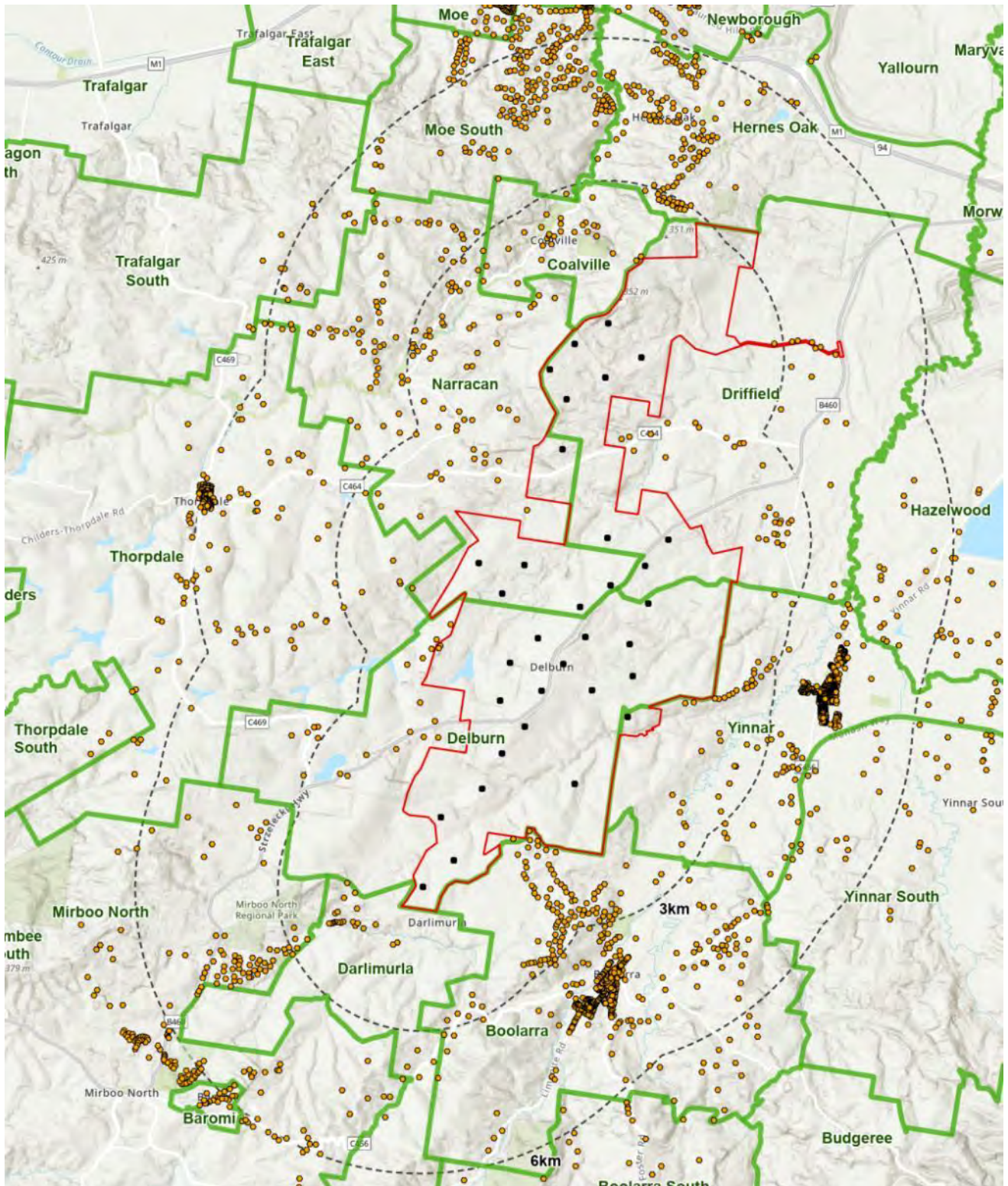


Figure 9-2: Residential dwellings within 6km of proposed turbines

A number of residential dwellings have been visited over the duration of the Project to assist with ongoing discussions regarding views, visibility and potential visual impact from residential dwellings. These visits have formed part of this landscape and visual impact assessment from residential dwellings and to assist OSML in providing information to local community.

The following section will assess residential dwellings surrounding the Project where the resident has given permission for their dwelling to be included in the assessment.

9.1 North-eastern Residential Cluster

The North-eastern Residential Cluster landscape is characterized by cleared rolling hills within the Driffield area out to cleared flat or slightly undulating farmland around Hazelwood. Vegetation is generally limited to roadsides, wind breaks and creek lines.

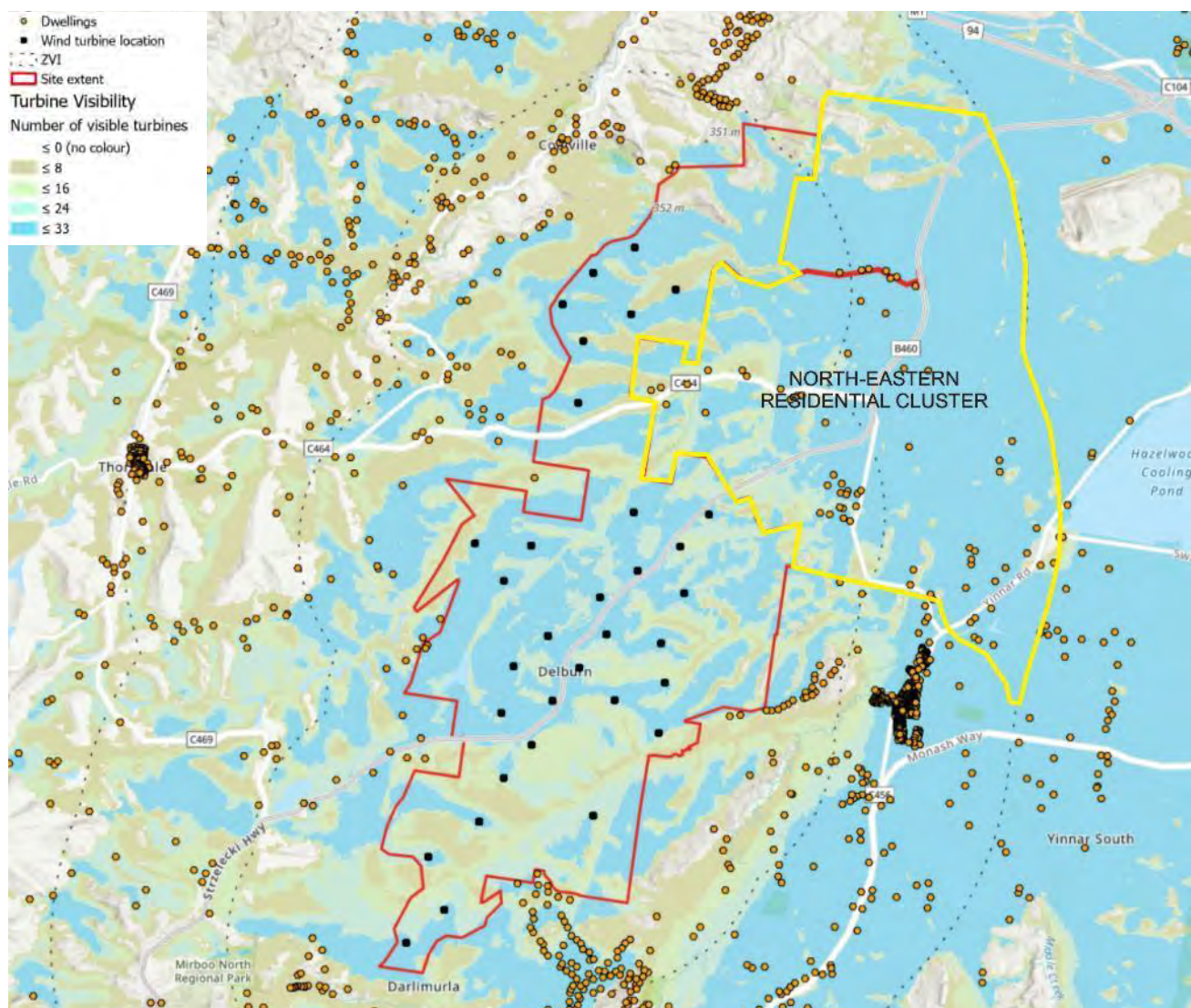


Figure 9-3: Northeastern Residential Cluster

A number of residential dwellings have been visited in this cluster, several dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment. These are assessed below.

9.1.1 Dwelling #607

Dwelling #607 is located within the North-eastern residential cluster. The nearest turbine is 1.7 km south (T16).

Figure 9-4 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-4: Dwelling #607 context map

Figure 9-5 shows the existing view looking south from the rear of the dwelling.

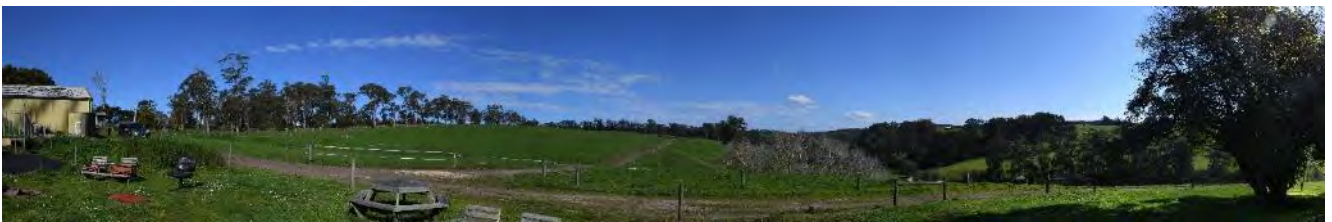


Figure 9-5: Dwelling #607 – Existing view looking south

Figure 9-6 shows a similar view looking south-west taken by OSMI using the TrueView imagery. This shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-6: Dwelling #607 – TrueView image looking south (Source: OSMI Australia)

Several turbines would sit above the ridge and existing vegetation seen in the background of Figure 9-6. The visual impact in this view would be high.

Figure 9-7 shows the existing view looking west from the deck on the western side of the dwelling.

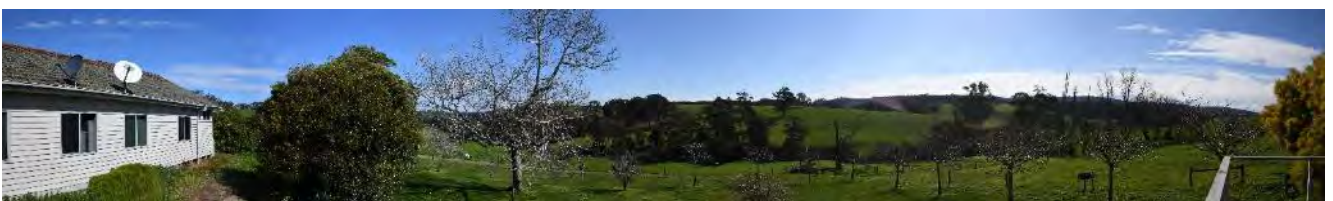


Figure 9-7: Dwelling #607 – Existing view looking west

Figure 9-8 shows a similar view looking west from the deck taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-8: Dwelling #607 – TrueView image looking west (Source: OSMI Australia)

In this view it is clear that the turbines would sit above the crest of the hill in the nearby paddock and existing vegetation within the lower creek and within the landscaped area attached to the dwelling.

Figure 9-9 shows a similar view looking north-west from the deck taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-9: Dwelling #607 – TrueView image looking north-west (Source: OSMI Australia)

Figure 9-9 shows that existing vegetation in proximity to the deck as well as several large trees along the creek line in the nearby paddocks to the north-west of the dwelling. This vegetation will assist to filter views to the turbines generally north-west and north of the dwelling.

The overall visual impact would be **High** due to the proximity of turbines in several key views and locations and areas of private open space in proximity to the dwelling.

Due to the elevated nature of views from the dwelling and the deck and the topography which falls away from the dwelling in directions of the turbines these views would be challenging to mitigate. Landscape mitigation is unlikely to be effective from this dwelling location.

9.1.2 Dwelling #4587

Dwelling #4587 is located within the North-eastern residential cluster. The nearest turbine is approximately 1.8km south (T16).

Figure 9-10 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-10: Dwelling #4587 context map

Figure 9-11 shows the existing view looking west from the dwelling entrance.



Figure 9-11: Dwelling #4587 – Existing view looking west

Figure 9-12 shows a similar view looking south taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-12: Dwelling #4587 – TrueView image looking south (Source: OSMI Australia)

Turbines would sit above the hill and existing vegetation when looking south from the front yard.

Figure 9-13 shows a similar view looking south-west towards Dwelling#607 taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-13: Dwelling #4587 – TrueView image looking south-west (Source: OSMI Australia)

Existing vegetation seen within Figure 9-13 shows the ability of landscape mitigation to assist in filtering views to turbines.

Figure 9-14 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-14: Dwelling #4587 – TrueView image looking west (Source: OSMI Australia)

Views to the north-west and north will be partially filtered or screened by vegetation within the road reserve. Turbines will be visible from the south through to the west.

For these reasons, the overall visual impact would be **Moderate-High**.

Existing vegetation seen in Figure 9-12 to Figure 9-14 shows the ability of landscape mitigation to assist in filtering views to turbines. Once landscape mitigation is established the visual impact would reduce to **Low**.

9.1.3 Dwelling #608

Dwelling #608 is located within the North-eastern residential cluster. The closest visible turbine is 1.6 km north-west (T02).

Figure 9-15 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-15: Dwelling #608 context map

Figure 9-16 shows the existing view looking north from the existing deck and entertaining area along the northern side of the dwelling.



Figure 9-16: Dwelling #608 – Existing view looking north

There are clear views to the north which are afforded by the elevated nature of the dwelling and fall of the land towards Morwell-Thorpdale Road to the north.

Figure 9-17 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-17: Dwelling #608 – TrueView image looking north (Source: OSMI Australia)

Figure 9-17 shows part of the view looking directly to the north with the nearest turbine in the view.

Figure 9-18 shows a view looking west taken from the western edge of the deck by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-18: Dwelling #608 – TrueView image looking west (Source: OSMI Australia)

Tips of the turbines are visible above the existing vegetation and less obvious than those to the north where there are clear views over the nearby paddocks and hills over the valley.

Figure 9-19 shows the existing view looking south to west from the rear of the dwelling.



Figure 9-19: Dwelling #608 – Existing view looking south to west

Figure 9-19 shows the existing view looking south from the dwelling includes a low rise, sheds and other structures.

Figure 9-20 shows a view looking south from the edge of the fence approximately 25m south west of the dwelling and seen roughly central to the view of Figure 9-19 taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-20: Dwelling # 608 – TrueView image looking south (Source: OSMI Australia)

This view sits above the low rise seen in Figure 9-19 and is therefore a conservative view. Figure 9-20 shows that as you move around the top of the hill south of the dwelling turbines would be visible.

Figure 9-21 shows a view looking south from the gate behind the shed approximately 50 m south-east of the dwelling taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-21: Dwelling #608 – TrueView image looking south from behind shed (Source: OSMI Australia)

There are clear views to the north and partially filtered views to the west from the main living areas at the dwelling. The main views would be from the entertaining deck.

The overall visual impact would be **High** due to the proximity of turbines in several key views and locations and areas of private open space in proximity to the dwelling.

Due to the elevated nature of views from the dwelling and the deck and the topography which falls away from the dwelling in directions of the turbines these views would be challenging to mitigate. Landscape mitigation is unlikely to be effective from this dwelling location in views to the north. For views to the south from the dwelling, landscape mitigation may be effective.

9.1.4 Dwelling #609

Dwelling #609 is located within the North-eastern residential cluster. The nearest turbine is 1.2 km south-west (T07).

Figure 9-22 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-22: Dwelling #609 context map

Figure 9-23 shows the existing view looking south through north from the driveway at the entrance to the dwelling.



Figure 9-23: Dwelling #609 – Existing view looking south through north

Figure 9-24 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-24: Dwelling #609 – TrueView image looking north-west (Source: OSMI Australia)

Figure 9-24 shows one turbine would be visible in a gap in vegetation when looking from the driveway.

Figure 9-25 shows a similar view looking northeast taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-25: Dwelling #609 – TrueView image looking northeast (Source: OSMI Australia)

Turbines will be visible through breaks in vegetation from select locations around the dwelling. The overall visual impact would be **Low-Moderate**.

If required, landscape mitigation may be possible however it would need to be implemented carefully and consider the BMO and planting distances from the dwelling.

9.2 Eastern Residential Cluster

The Eastern Residential Cluster landscape is characterized by cleared flat or slightly undulating farmland. Vegetation is generally limited to roadsides, wind breaks and creek lines.

The majority of residential dwellings to the east of the project sit within the Yinnar township or along Creamery Road closer to the proposed wind farm.

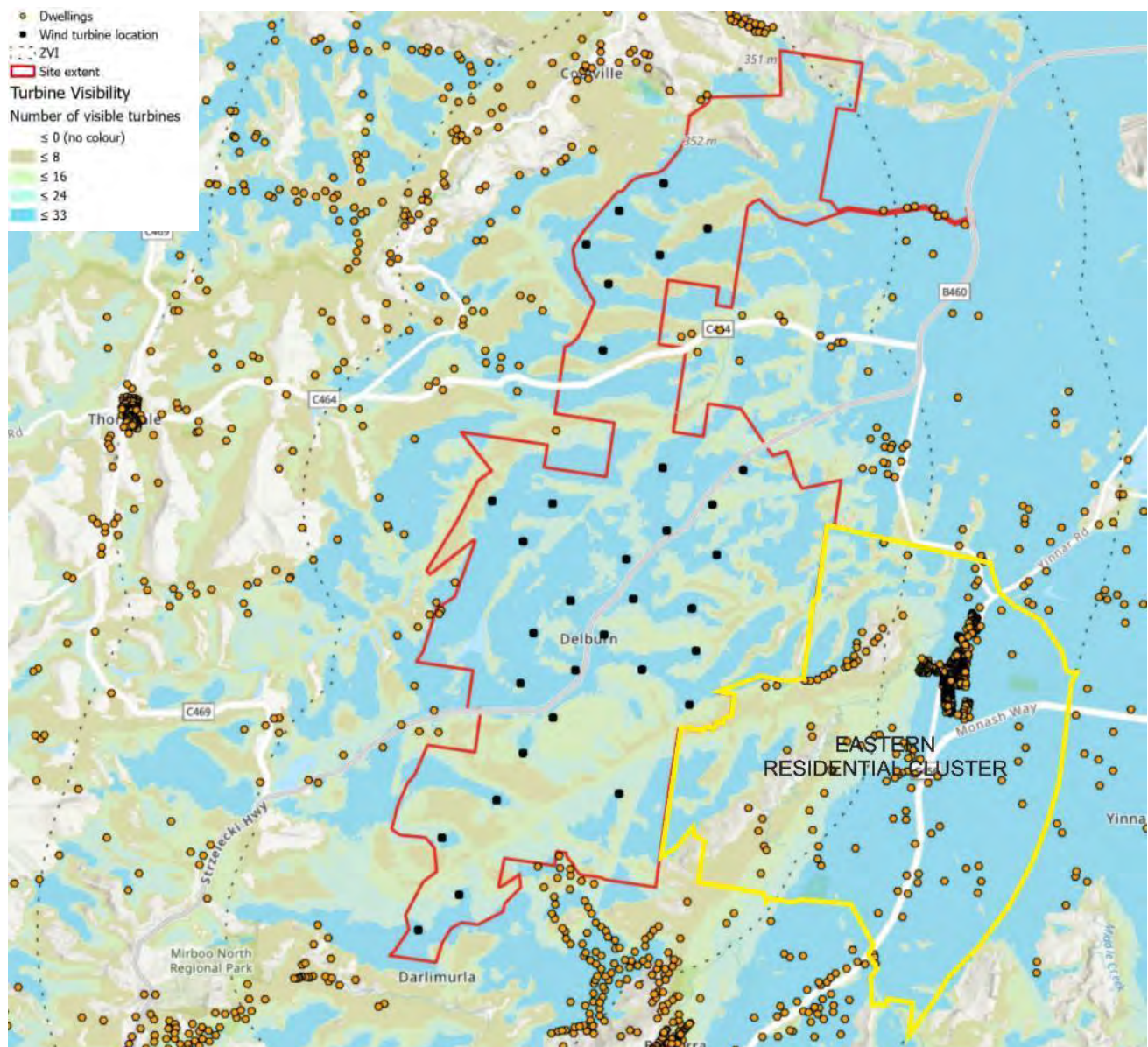


Figure 9-26: Eastern Residential Cluster

A number of residential dwellings have been visited in this cluster, several dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment. These are assessed below.

9.2.1 Dwelling #686

Dwelling #686 is located within the Eastern residential cluster. The nearest turbine is approximately 4.0 km north-west (T16).

Figure 9-27 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.

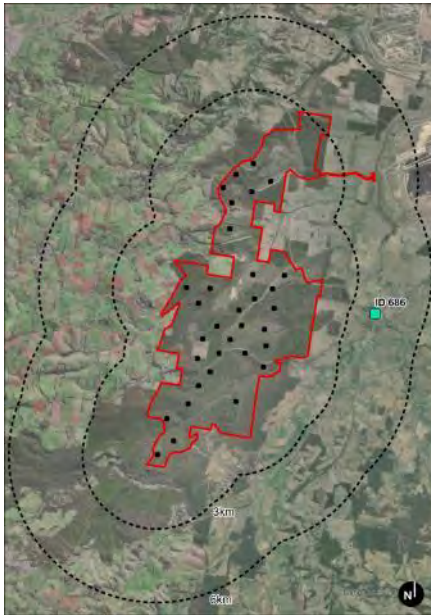


Figure 9-27: Dwelling #686 context map

Figure 9-28 shows the existing view looking west from the rear of the dwelling.



Figure 9-28: Dwelling #686 – Existing view looking west

Figure 9-29 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-29: Dwelling #686 – TrueView image looking west (Source: OSMI Australia)

Figure 9-30 shows a similar view looking north-west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-30: Dwelling #686 – TrueView image looking north-west (Source: OSMI Australia)

Several turbines would sit above the ridge and existing vegetation seen in the background from key areas within and around the dwelling. For these reasons, the overall visual impact would be **High**.

Mitigation efforts may be limited by topography. Mitigation will also remove views over Morwell River Valley and the elevated backdrop on which the turbines are sited.

9.2.2 Dwelling #749

Dwelling #749 is located within the Eastern residential cluster. The nearest turbine is approximately 3.0 km north-west (T16).

Figure 9-31 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-31: Dwelling #749 context map

Figure 9-32 shows the existing view looking north-west from the front of the dwelling.



Figure 9-32: Dwelling #749 – Existing view looking north-west from the front of the dwelling

Figure 9-33 shows a similar view looking north-west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-33: Dwelling #749 – TrueView image looking north-west (Source: OSMI Australia)

Figure 9-34 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-34: Dwelling #749 – TrueView image looking west (Source: OSMI Australia)

From in and around the dwelling views to turbines will be filtered or screened by existing vegetation in the front garden. As seen in Figure 9-33 during the winter months several deciduous trees will lose their leaves and several turbines may be visible from select angles in the front yard.

Figure 9-35 shows the existing view looking north-west from the driveway north of the dwelling.



Figure 9-35: Dwelling #749 – Existing view looking north-west from the driveway

Figure 9-36 shows a similar view looking north-west from driveway taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-36: Dwelling #749 – TrueView image looking north-west (Source: OSMI Australia)

Views to turbines from in and around the dwelling are limited by existing vegetation. The visual impact from these areas would therefore be assessed as **Low**. When travelling along the driveway before heading south to the entrance to the dwelling, turbines will be visible on top of the ridge to the north-west from a gap in roadside vegetation. From this location the visual impact would be **Moderate**.

Existing vegetation seen in the images above shows the ability for landscaping to be able to mitigate, filter and screen views to turbines from this location should it be required. Once established this would reduce the visual impact to **Low**.

9.2.3 Dwelling #1177

Dwelling #1177 is located within the Eastern residential cluster. The nearest turbine is approximately 2.3km north-west (T29).

Figure 9-37 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-37: Dwelling #1177 context map

The main entertaining area is to the south of the dwelling and orientated away from the Project over the dam.

Figure 9-38 shows the existing view looking west through north from the rear of the dwelling.



Figure 9-38: Dwelling #1177 – Existing view looking west through north

Figure 9-39 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-39: Dwelling #1177 – TrueView image looking west (Source: OSMI Australia)

Figure 9-40 shows the existing view looking west through north from the driveway at the front of the dwelling.



Figure 9-40: Dwelling #1177 – Existing view looking west through north

Figure 9-41 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-41: Dwelling #1177 – TrueView image looking west (Source: OSMI Australia)

Figure 9-42 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-42: Dwelling #1177 – TrueView image looking north (Source: OSMI Australia)

The main private open space areas are orientated to the south and south-east away from the Project. Tips of turbines may be visible above the ridge and existing vegetation seen in background of the views as you move around the property, however they would not sit in key views.

For these reasons, the overall visual impact would be **Low-negligible**.

9.2.4 Dwelling #4533

Dwelling #4533 is located within the Eastern residential cluster. The nearest turbine is approximately 2.4km north-west (T18).

Figure 9-43 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-43: Dwelling #4533 context map

Key views from the dwelling are orientated south towards the valley.

Figure 9-44 shows the existing view looking north-west through northeast from the driveway at the front of the dwelling.



Figure 9-44: Dwelling #4533 – Existing view looking north-west through northeast

Existing topography and vegetation would screen views towards the Project. Turbines would not be visible from the dwelling. For these reasons, the overall visual impact would be **Nil**.

9.2.5 Dwelling #4579

Dwelling #4579 is located within the Eastern residential cluster. The nearest turbine is approximately 2.5km west (T18).

Figure 9-45 shows the approximate location of the proposed dwelling in relation to the wind farm.

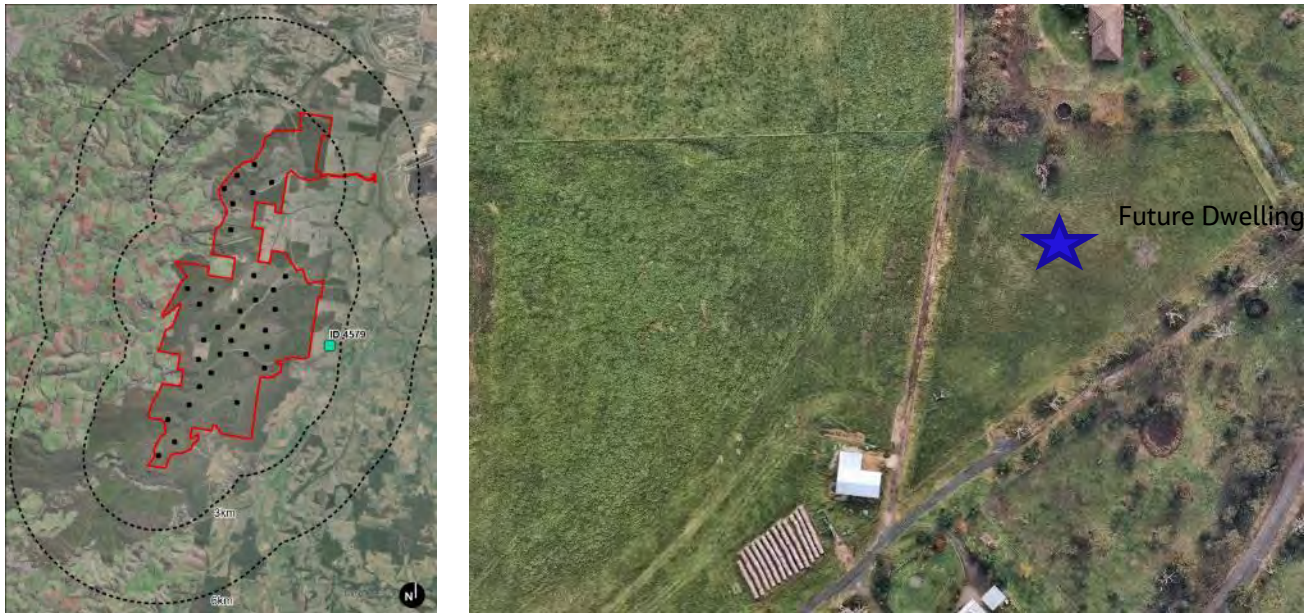


Figure 9-45: Dwelling #4579 context map

There is currently no dwelling on this property. A planning permit application has been lodged for a future dwelling and is therefore considered relevant for inclusion within this assessment.

Figure 9-46 shows the existing view looking west from the edge boundary of the proposed new dwelling.



Figure 9-46: Dwelling #4579 – Existing view looking

Figure 9-47 shows a similar view looking west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-47: Dwelling #4579 – TrueView image looking south-west (Source: OSMI Australia)

Figure 9-48 taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-48: Dwelling #4579 – TrueView image looking west (Source: OSMI Australia)

Figure 9-49 taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-49: Dwelling #4579 – TrueView image looking north-west (Source: OSMI Australia)

At the time of this assessment it is unclear what the main orientation and direction of the dwelling is. To be conservative we have taken the view looking south-west to north-west in the direction of the turbines.

Turbines would sit above the ridge and existing plantation to the south-west, west and north-west of this location.

For these reasons, the overall visual impact would be **High**.

The view could be mitigated; however, it would take away the view over pine plantation and nearby hills. Landscape mitigation could be designed to include tall clear trunked trees to filter turbines while keeping views to nearby paddocks through the underside of the trees.

9.3 South-eastern Residential Cluster

The South-eastern residential cluster is characterized by vegetated hills both natural and plantation. The majority of residential dwellings to the south-east lie within Boolarra township and the rural residential outskirts of the township to the north-west.

There is a large amount of vegetation within this area that will filter or screen most views. However, there will be a few areas where gaps in vegetation allow views to the Project.

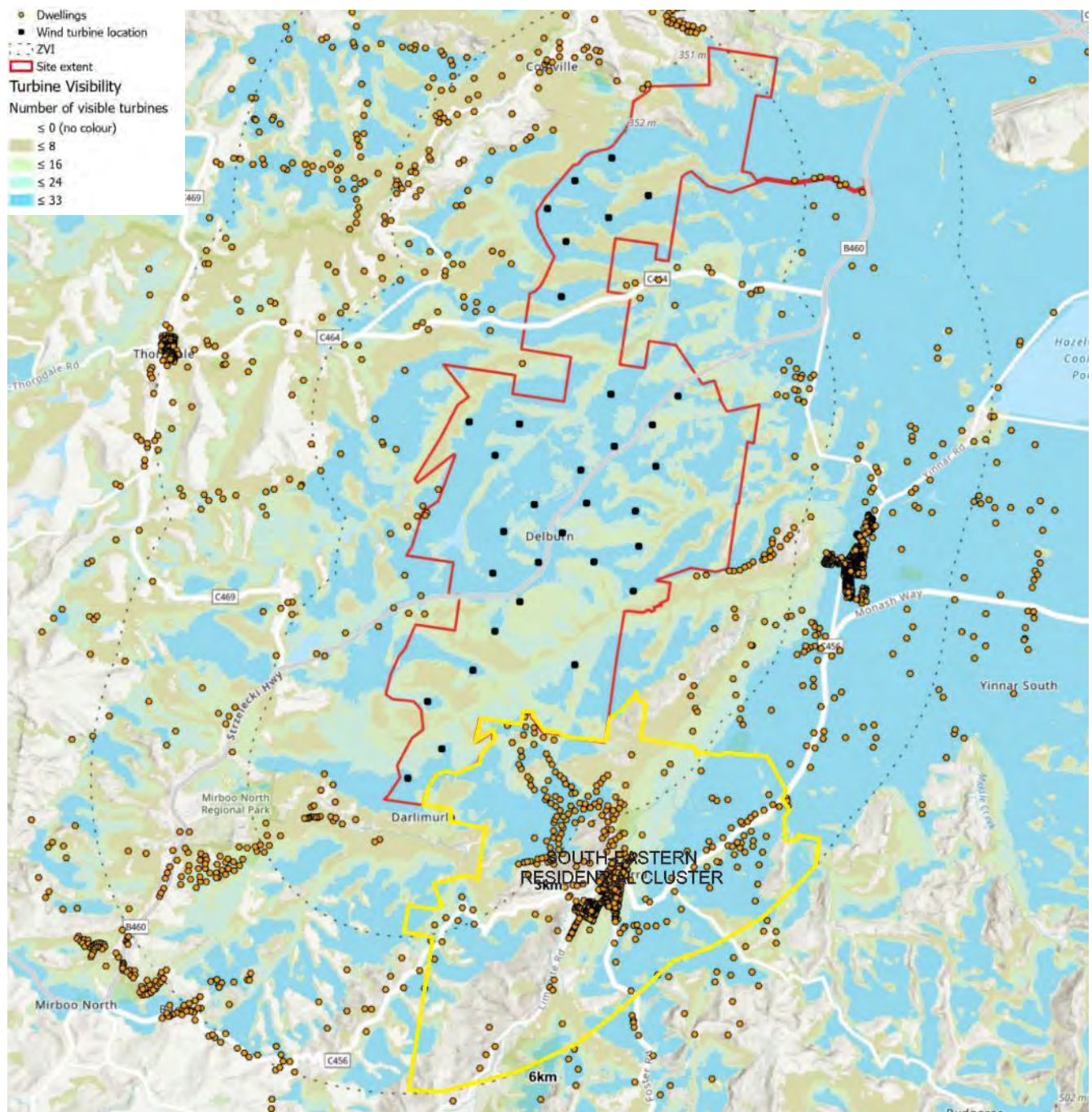


Figure 9-50: South-eastern Residential Cluster

A number of residential dwellings have been visited in this cluster, several dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment. This is assessed below.

9.3.1 Dwelling #596

Dwelling #596 is located within the South-eastern residential cluster. The nearest turbine is approximately 2.7 km north-west (T32).

Figure 9-51 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-51: Dwelling #596 context map

Figure 9-52 shows the existing view looking west through north from the entertaining area at the rear of the dwelling.



Figure 9-52: Dwelling #596 – Existing view looking west through north

Figure 9-53 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-53: Dwelling #596 – TrueView image looking north (Source: OSMI Australia)

Existing vegetation will filter views to turbines from the entertaining area.

Figure 9-54 shows the existing view looking north from the edge of the pigsty approximately 25m north of the dwelling.



Figure 9-54: Dwelling #596 – Existing view looking north

Figure 9-55 shows a similar view looking north-west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-55: Dwelling #596 – TrueView image looking north-west (Source: OSMI Australia)

Figure 9-56 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-56: Dwelling #596 – TrueView image looking north (Source: OSMI Australia)

Existing vegetation and topography would filter or screen views from key areas of private open space around the dwelling. For these reasons, the visual impact would be **Negligible-Nil**.

9.3.2 Dwelling #600

Dwelling #600 is located within the South-eastern residential cluster. The nearest turbine is approximately 1.5 km west (T32).

Figure 9-57 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.

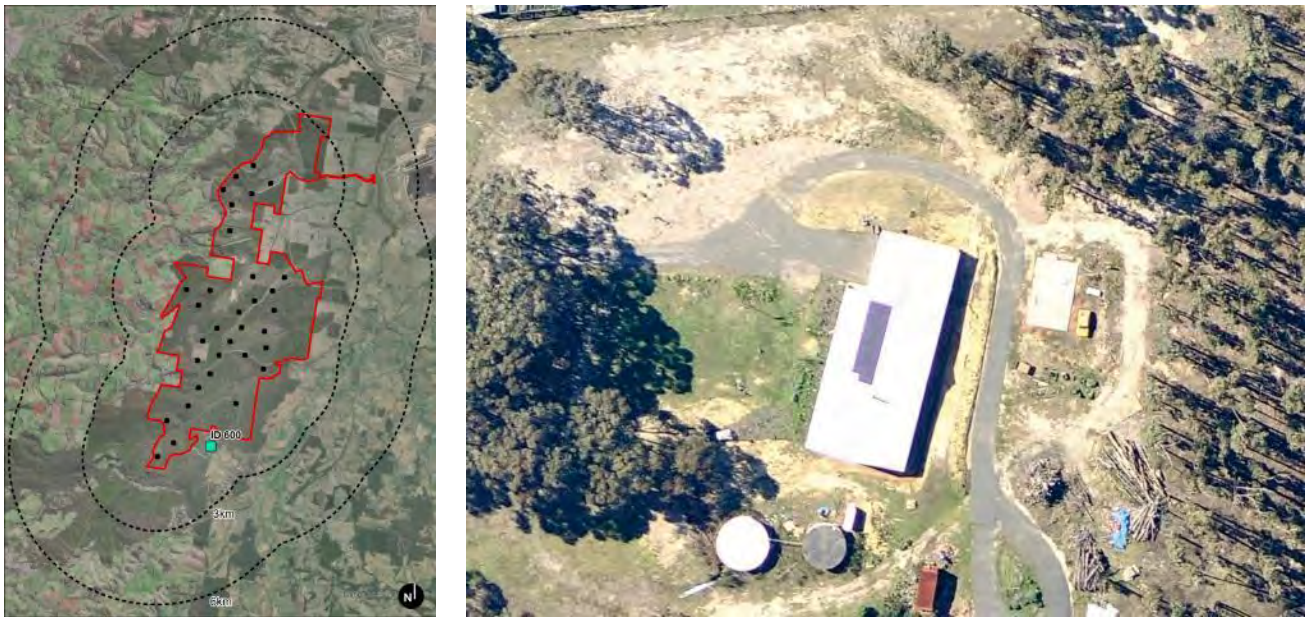


Figure 9-57: Dwelling #600 context map

Figure 9-58 shows the existing view looking west through north-west from the front of the dwelling.



Figure 9-58: Dwelling #600 – Existing view looking west through north-west

Figure 9-59 shows a similar view looking west from the driveway in front of the dwelling taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-59: Dwelling #600 – TrueView image looking west (Source: OSMI Australia)

Existing vegetation within the road reserve of Todds Road and within the property would filter views to the west.

Figure 9-60 shows a similar view looking north from the front of the dwelling taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-60: Dwelling #600 – TrueView image looking north (Source: OSMI Australia)

Main views from the dwelling to the west would be filtered by existing vegetation within the road reserve of Todds Road and on the property. However, views from the veranda and main entrance would include turbines to the north-west.

As the turbines do not reside in the primary view, the overall visual impact is considered to be **Low- Moderate** from the property. Views from the veranda would be **Moderate-High**.

The overall visual impact from this dwelling would be **Moderate**.

Mitigation may be possible however it would need to be implemented carefully and consider the BMO and planting distances from the dwelling.

9.3.3 Dwelling #4064

Dwelling #4064 is located within the South-eastern residential cluster. The nearest turbine is approximately 2.6 km north (T29).

Figure 9-61 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-61: Dwelling #4064 context map

Figure 9-62 shows the existing view looking north from the front of the dwelling.



Figure 9-62: Dwelling #4064 – Existing view looking north

Figure 9-63 shows a similar view looking north-west taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-63: Dwelling #4064 – TrueView image looking north-west (Source: OSMI Australia)

Figure 9-66 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-64: Dwelling #4064 – TrueView image looking north (Source: OSMI Australia)

Figure 9-65 shows the existing view looking north from the hill behind the dwelling.



Figure 9-65: Dwelling #4064 – Existing view looking north from the hill behind the dwelling

Figure 9-66 shows a similar view looking north from the hill behind the dwelling taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-66: Dwelling #4064 – TrueView image looking north (Source: OSMI Australia)

Views of turbines from around the dwelling would be filtered or screened by vegetation from views. Blades of several turbines may be visible above the ridge and existing vegetation seen in background of the views as you move around the property, however they would not sit in key views.

For these reasons, the overall visual impact would be **Low**.

It is unlikely mitigation would be possible to screen the blades of these several turbines due to the elevated nature of the view and the slope of the topography away from the view. Mitigation if considered, would need to be implemented carefully and consider the BMO.

9.3.4 Dwelling #4585

Dwelling #4585 is located within the South-eastern residential cluster. The nearest turbine is approximately 2.1 km north-west (T32).

Figure 9-67 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-67: Dwelling #4585 context map

Figure 9-68 shows the existing view looking north-west from the entertainment area on the northern side of the dwelling.



Figure 9-68: Dwelling #4585 – Existing view looking north

Figure 9-69 shows a similar view looking north taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-69: Dwelling #4585 – TrueView image looking north (Source: OSMI Australia)

Figure 9-70 shows a similar view looking northeast taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-70: Dwelling #4585 – TrueView image looking northeast (Source: OSMI Australia)

Tips and blades of several turbines would be visible above existing vegetation as you move around the dwelling and from the key entertaining area on the northern edge of the dwelling. For these reasons, the overall visual impact would be **Moderate**.

Landscape mitigation is unlikely to be effective from this dwelling location, due to the timeframe to achieve the vegetation heights required to filter views to the blades visible above the existing vegetation.

9.4 South-western Residential Cluster

The South-western residential cluster is characterized by vegetated hills both natural and plantation. The majority of residential dwellings to the south-west lie within Darlimurla and Mirboo North.

There is a large amount of vegetation within this area that will filter or screen most views. There are not many areas where gaps in vegetation will allow views to the project.

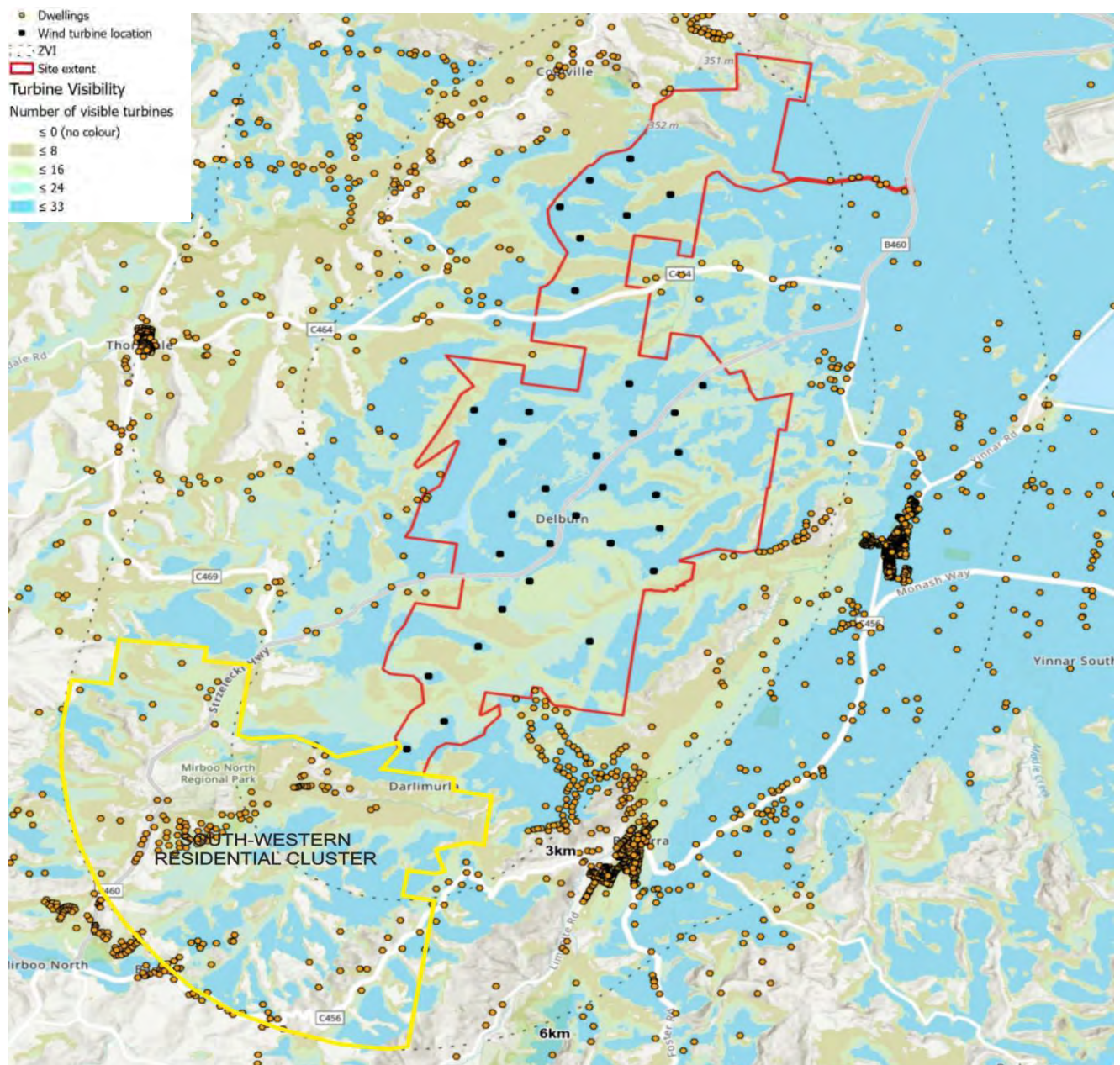


Figure 9-71: South-western Residential Cluster

A number of residential dwellings have been visited in this cluster, no dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment.

It is clear from the SAA above there would be limited visibility for the majority of these dwellings, shown as white or light green. This is further demonstrated by the local road viewpoint L14 in Section 8.5 which shows the nature and scale of views within this area of Darlimurla.

Figure 8-70 shows a wireframe view of Local Road Viewpoint L14 the “Concept Layout” (V1.5, being 53 wind turbines). The wireframe view shows that the proposed wind turbines would be largely screened by topography and vegetation. From some locations, the tip of a turbine blade may be visible above vegetation.



Figure 9-72: Viewpoint L14 – Wireframe of Concept Layout (V1.5, being 53 wind turbines)

There may be glimpses of parts of turbines, where gaps in vegetation allow. However, due to existing topography and vegetation the turbines will be barely visible and from limited locations.

9.5 Western Residential Cluster

The Western Residential Cluster is characterised by rolling hills, and extensive roadside vegetation and trees within the pine plantations of the Project. Views in this location tend to be more dramatic due to the regular closing and opening up of views across the landscape permitted by topography and vegetation.

The majority of dwellings are located within the townships of Thorpdale with scattered dwellings in Delburn.

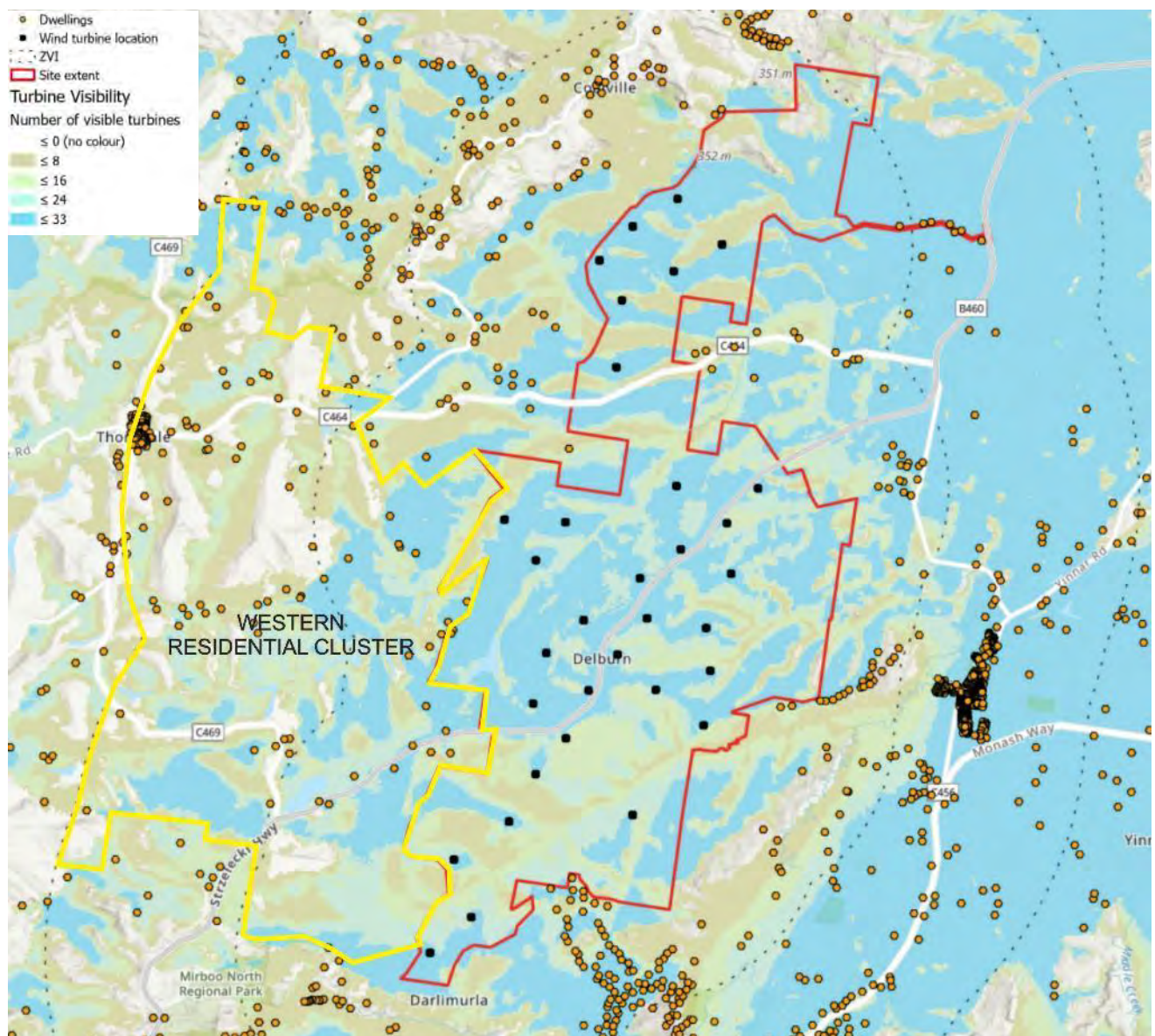


Figure 9-73: Western Residential Cluster

A number of residential dwellings have been visited in this cluster, several dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment. These are assessed below.

9.5.1 Dwelling #824

Dwelling #824 is located within the Western residential cluster. The nearest turbine is approximately 1.4 km northeast (T21).

Figure 9-74 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-74: Dwelling #824 context map

Figure 9-75 shows the existing view looking east from the rear of the dwelling.



Figure 9-75: Dwelling #824 – Existing view looking east

Figure 9-76 shows a similar view looking east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-76: Dwelling #824 – TrueView image looking east (Source: OSMI Australia)

Figure 9-77 shows a similar view looking south-east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-77: Dwelling #824 – TrueView image looking south-east (Source: OSMI Australia)

Several turbines would be visible to the east above the existing ridge and vegetation shown central to the view in Figure 9-76. Views to the south-east and northeast would be filtered by existing vegetation.

For these reasons, the overall visual impact would be **Moderate-High** without mitigation.

From this location, mitigation would be possible as shown by existing vegetation within the view. The resultant visual impact would be **Low-Moderate**.

9.5.2 Dwelling #832

Dwelling #832 is located within the Western residential cluster. The nearest turbine is approximately 1.2 km north-west (T25).

Figure 9-78 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-78: Dwelling #832 context map

Figure 9-79 shows the existing view looking east from the front entrance to the dwelling.



Figure 9-79: Dwelling #832 – Existing view looking east

Figure 9-80 shows a similar view looking east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-80: Dwelling #832 – TrueView image looking east (Source: OSMI Australia)

Turbines would be visible above the existing plantation vegetation seen in Figure 9-80. As the plantation continues to grow this will assist to further filter views to turbines.

Figure 9-81 shows a similar view looking northeast taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-81: Dwelling #832 – TrueView image looking northeast (Source: OSMI Australia)

Existing vegetation within the front garden of the dwelling filters views to turbines in the northeast.

Figure 9-82 shows a similar view looking north from the front entrance taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-82: Dwelling #832 – TrueView image looking north (Source: OSMI Australia)

Turbines would be visible above the existing plantation vegetation in views to the east. As the plantation continues to grow this will assist to further filter views to turbines. Existing vegetation within the frontage would filter views to the north and northeast. For these reasons, the overall visual impact would be **Moderate**.

Existing vegetation shown within the views, indicates landscape mitigation would assist in filtering views if required. Once established, this would reduce the visual impact to the **Low-Negligible**.

9.6 North-western Residential Cluster

The North-western residential cluster is characterized by vegetated hills both natural and plantation. The majority of residential dwellings to the north-west lie around the townships of Narracan and Coalville.

There is an extensive amount of vegetation within this area that will filter or screen most views.

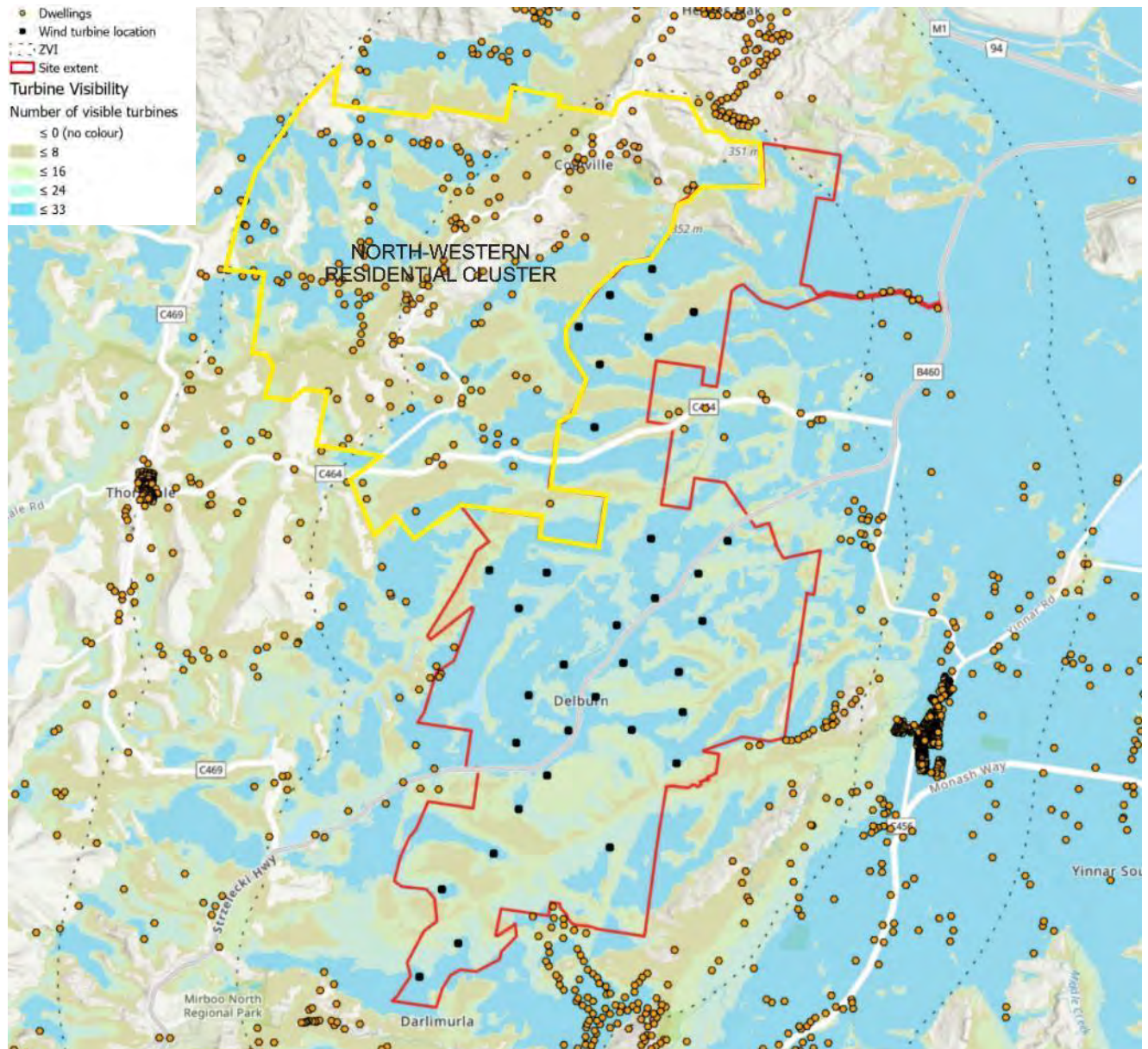


Figure 9-83: North-western Residential Cluster

A number of residential dwellings have been visited in this cluster, several dwellings have provided their consent for the assessment of views and visual impact from their dwelling to be included within this assessment. These are assessed below.

9.6.1 Dwelling #23

Dwelling #23 is located within the North-western residential cluster. The nearest turbine is approximately 4.4 km south-east (T05).

Figure 9-84 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-84: Dwelling #23 context map

Figure 9-85 shows the existing view looking south-east from the main deck.



Figure 9-85: Dwelling #23 – Existing view looking south-east from main deck

Figure 9-86 shows a similar view looking south-east from the main deck taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-86: Dwelling #23 – TrueView image looking south-east (Source: OSMI Australia)

Views from the balcony include turbines at the northern end of the Project. Turbines within the central and southern portions of the wind farm would be screened by existing vegetation, topography and other parts of the dwelling as seen to the right of the figure above.

Figure 9-87 shows the existing view looking south-east from the master bedroom balcony.



Figure 9-87: Dwelling #23 – Existing view looking south-east from master bedroom balcony

Figure 9-88 shows a similar view looking south-east from the master bedroom balcony taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-88: Dwelling #23 – TrueView image looking south-east from master bedroom balcony (Source: OSMI Australia)

Views from key private open space areas includes turbines at the northern end of the Project. Turbines within the central and southern portions of the wind farm would be screened by existing vegetation and topography seen to the right of the figure above.

The overall visual impact would be **High** due to the proximity of turbines in several key views and locations and areas of private open space in proximity to the dwelling.

Due to the elevated nature of views from the dwelling and the deck and the topography which falls away from the dwelling in directions of the turbines these views would be challenging to mitigate. Landscape mitigation is unlikely to be effective from this dwelling location and would also alter or remove views across the valley.

9.6.2 Dwelling #849

Dwelling #849 is located within the North-western residential cluster. The nearest turbine is approximately 1.6 km northeast (T07).

Figure 9-89 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-89: Dwelling #849 context map

Figure 9-90 shows the existing view looking east from the deck at the rear of the dwelling.

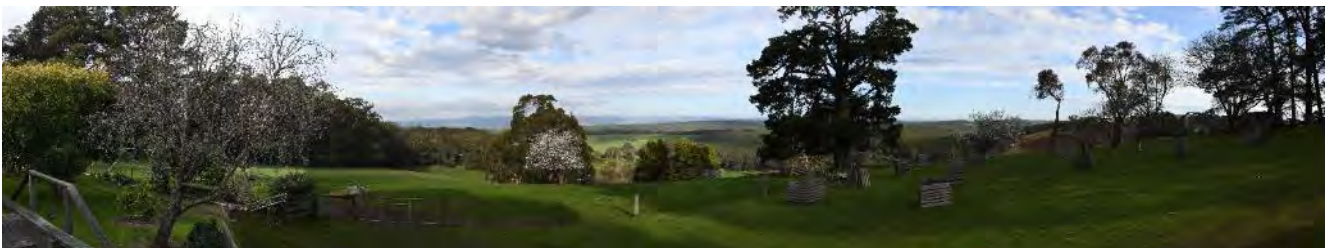


Figure 9-90: Dwelling #849 – Existing view looking east

Figure 9-91 shows a similar view looking east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-91: Dwelling #849 – TrueView image looking east (Source: OSMI Australia)

Views to the northeast and the turbines to the north of the Project would be filtered by existing vegetation seen to the left of the image above. Turbines in the central part of the Project would be visible above the existing plantation.

Figure 9-92 shows a similar view looking south-east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-92: Dwelling #849 – TrueView image looking south-east (Source: OSMI Australia)

Several turbines in the southern section of the Project would be visible in gaps in vegetation seen to the right of the image above. Senescing Cypress will expose additional views over time to other turbines in the southern section of the Project as it is nearing the end of its useful life.

Views to the northeast and the turbines to the north of the Project would be filtered by existing vegetation seen to the left of the image above. Turbines in the central and southern part of the Project would be visible above the existing plantation.

The overall visual impact would be **High** due to the proximity of turbines in several key views from areas of private open space in proximity to the dwelling.

Due to the elevated nature of views from the dwelling and the deck and the topography which falls away from the dwelling in directions of the turbines these views would be challenging to mitigate. Landscape mitigation is unlikely to be effective from this dwelling location.

9.6.3 Dwelling #857

Dwelling #857 is located within the North-western residential cluster. The nearest turbine is approximately 1.9 km south-east (T07).

Figure 9-93 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-93: Dwelling #857 context map

Figure 9-94 shows the existing view looking northeast from the front of the dwelling.



Figure 9-94: Dwelling #857 – Existing view looking northeast

Figure 9-95 shows a similar view looking northeast taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-95: Dwelling #857 – TrueView image looking northeast (Source: OSMI Australia)

Turbines in the northern section of the Project would be visible as moving around the frontage of the dwelling. Views from the front door above show turbines will be partially filtered or screened by existing vegetation.

Figure 9-96 shows the existing view looking east from the rear of the dwelling.



Figure 9-96: Dwelling #857 – Existing view looking east

Figure 9-97 shows a similar view looking east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-97: Dwelling #857 – TrueView image looking east (Source: OSMI Australia)

One turbine would be visible oblique to the main view to the south of the dwelling. Existing vegetation shown in the figure above will continue to grow and will filter views to this turbine.

Turbines to the south will not be visible due to topography and existing vegetation.

Turbines in the northern section of the Project would be visible as you are moving around the frontage of the dwelling. Views from the front door show turbines will be partially filtered or screened by existing vegetation.

Turbines are generally oblique to the main views. For these reasons, the overall visual impact would be **Low-Moderate**.

Several turbines are filtered by existing vegetation and can be screened which would reduce the visual impact to **Low-Negligible**.

9.6.4 Dwelling #867

Dwelling #867 is located within the North-western residential cluster. The nearest turbine is approximately 1.5 km south-west (T05).

Figure 9-98 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-98: Dwelling #867 context map

Figure 9-99 shows the existing view looking south-east from the rear of the dwelling.



Figure 9-99: Dwelling #867 – Existing view looking south-east

Figure 9-100 shows a similar view looking south-east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-100: Dwelling #867 – TrueView image looking south-east (Source: OSMI Australia)

Several turbines would be visible to the south-east above the existing ridge and vegetation shown central to the view above.

Figure 9-101 shows a similar view looking east taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-101: Dwelling #867 – TrueView image looking east (Source: OSMI Australia)

Turbines to the north of the Project would be filtered by existing vegetation shown to the left of the view above.

Several turbines would be visible to the south-east above the existing ridge and vegetation shown central to the view above.

For these reasons, the overall visual impact would be **Moderate-High** without mitigation.

From this dwelling, mitigation would be possible. One option would be to plant a copse of trees just off the boundary in the paddock to filter views to visible turbines. Another option would be to plant taller shrubs that would be quicker to establish than the copse of trees. Figure 9-100 and Figure 9-101 indicate that existing shrub heights would filter views to turbines.

The resulting visual impact after mitigation would be **Low-Moderate**.

9.6.5 Dwelling #1266

Dwelling #1266 is located within the North-western residential cluster. The nearest turbine is approximately 2.5km south-east (T05).

Figure 9-102 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 9-102: Dwelling #1266 context map

Figure 9-103 shows a view looking east from the front yard taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-103: Dwelling #1266 – TrueView image looking east (Source: OSMI Australia)

Figure 9-104 shows a similar view looking east from the from yard where a gap in vegetation allows views towards turbines, taken by OSMI using the TrueView imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 9-104: Dwelling #1266 – TrueView image looking east (Source: OSMI Australia)

Potential for several tips of turbines to be visible above the ridgeline and existing vegetation at the back of the view above. These views are not from key private open space.

For these reasons, the overall visual impact would be **Low-Negligible**.

Vegetation shown within the TrueView imagery indicates that if required landscape mitigation would be successful.

9.7 Northern Residential Cluster

The Northern residential cluster is characterized by vegetated hills both natural and plantation. The majority of residential dwellings to the north lie within the townships of Hernes Oak and Moe south.

There is a large amount of vegetation within this area that will filter or screen most views. Not many areas exist where gaps in vegetation will allow views to the Project. If there are views, they include existing power and transmission infrastructure.

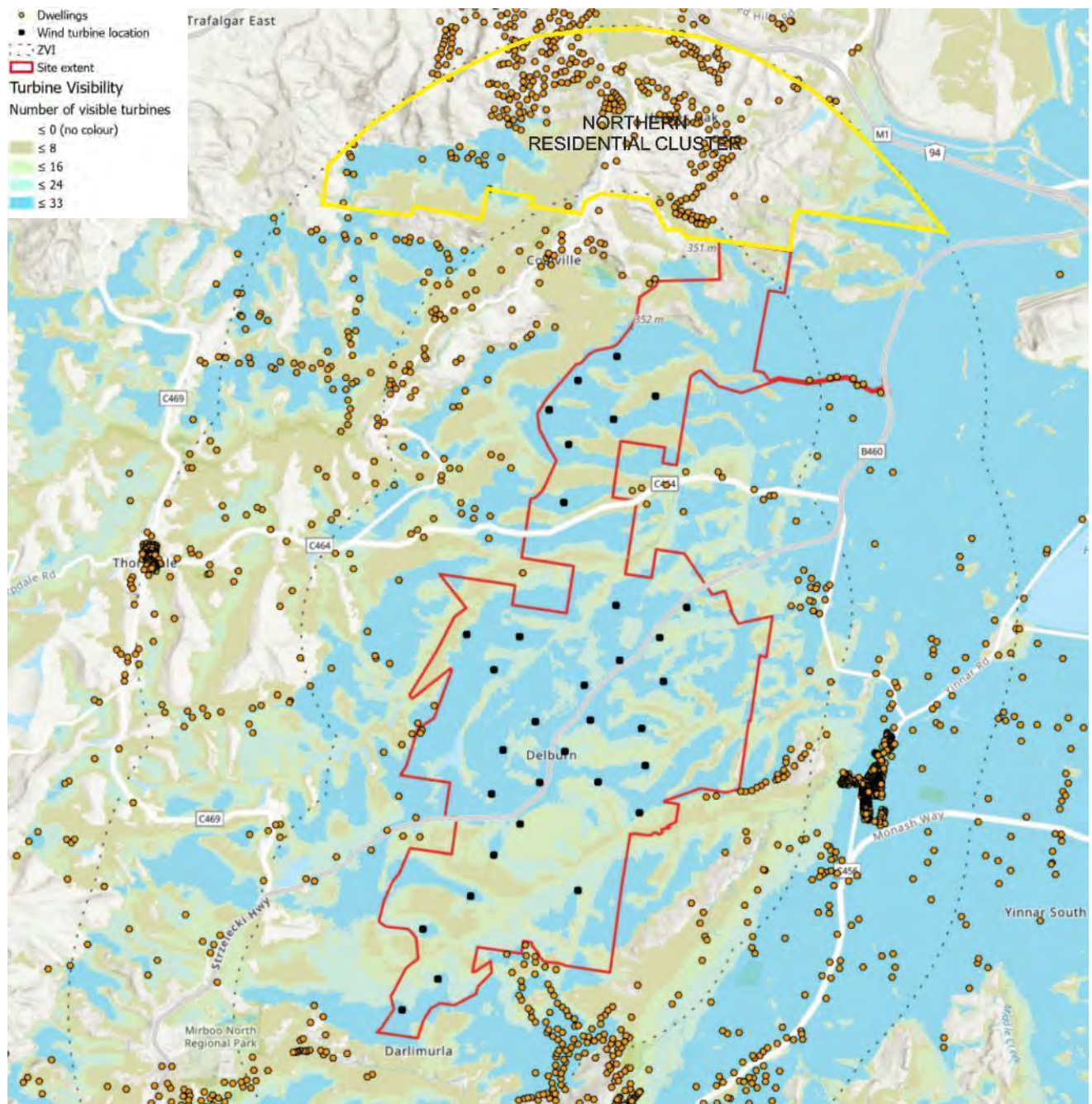


Figure 9-105: Northern Residential Cluster

No residential dwellings have been visited in the northern residential cluster. Distance to nearest turbines, topographical variation mean that a large number of dwellings wouldn't have visibility, based on topography alone. This is demonstrated both in visual assessment from publicly assessable locations at Viewpoint L22, 23 and 24 in Section 8.5 and the SAA models shown above.

9.8 Residential Viewpoint Summary

Of the dwellings visited 20 residents gave permission for their dwelling to be included within this assessment. Table 9-2 summarised the findings of these 20 dwellings.

Table 9-2: Residential Assessment Summary

Dwelling ID	Location	Distance to nearest turbine	Visual Impact Assessment	Landscape Mitigation
Dwelling #23	North-western Cluster	4.4km SE (T05)	High	Unlikely to be mitigated
Dwelling #596	South-eastern Cluster	2.7km NW (T32)	Negligible-Nil	Not likely required
Dwelling #600	South-eastern Cluster	1.5km W (T32)	Moderate	Mitigation possible, however must be implemented carefully and consider the BMO
Dwelling #607	North-eastern Cluster	1.7km SE (T16)	High	Unlikely to be mitigated
Dwelling #608	North-eastern Cluster	1.6km NW (T02)	High	Views to the north unlikely to be mitigated. Mitigation possible to the south, however, would need to be implemented carefully and consider the BMO.
Dwelling #609	North-eastern Cluster	1.2km SW (T07)	Low-Moderate	Mitigation not likely required, however must be implemented carefully and consider the BMO
Dwelling #686	Easter Cluster	4.0km NW (T16)	High	Mitigation may be limited due to topography and would remove views
Dwelling #749	Eastern Cluster	3.0km NW (T19)	Low-Moderate	Mitigation possible
Dwelling #824	Western Cluster	1.4km NE (T21)	Moderate-High	Mitigation possible
Dwelling #832	Western Cluster	1.2km NE (T25)	Moderate	Mitigation possible
Dwelling #849	North-western Cluster	1.6km NE (T07)	High	Unlikely to be mitigated
Dwelling #857	North-western Cluster	1.9km SE (T07)	Low-Moderate	Mitigation possible
Dwelling #867	North-western Cluster	1.5km SE (T05)	Low-Moderate	Mitigation possible
Dwelling #1177	Easter Cluster	2.3km NW (T29)	Low-Negligible	Not likely required
Dwelling #1266	North-western Cluster	2.5km SE (T05)	Low-Negligible	Mitigation possible
Dwelling #4064	South-eastern Cluster	2.6km N (T29)	Low	Unlikely to be mitigated
Dwelling #4533	Easter Cluster	2.5km W (T18)	Nil	Not required
Dwelling #4579	Easter Cluster	2.4km NW (T18)	High	Mitigation possible, however must be implemented carefully and consider BMO
Dwelling #4585	South-eastern Cluster	2.1km NW (T32)	Moderate	Unlikely to be mitigated

Dwelling ID	Location	Distance to nearest turbine	Visual Impact Assessment	Landscape Mitigation
Dwelling #4587	North-eastern Cluster	1.8km S (T16)	Low-Moderate	Landscape Mitigation possible

The SAA shows that there is greater visibility for areas east in the clear flat plain of Hazelwood and Yinnar. For those areas to the north of the project, visibility is largely defined by topography, which has shown a large number of dwellings will have little to no visibility at all. Further, this analysis shows that although there are a number of residential dwellings within 6km of a turbine, actual visibility and visual impact varies greatly across the project.

The greatest potential for visual impacts to be brought about by the project relates to individual residential dwellings located in close proximity to the Project. Views from these areas are equally as diverse to the west where views and resulting visual impact changes drastically. Views from some dwellings will have a high level of visual impact next to neighbouring dwellings that are also in close proximity and will have no turbine visibility. This is due to topography of the landscape in which the dwellings are located, the orientation and vegetation both within the private realm and in proximity to the dwelling as well as vegetation in the surrounding landscape.

As with the views from local roads, residential clusters vary greatly within the viewshed depending on location and proximity to the Project.

Areas to the west tend to be more confined due to the rolling hills, and extensive roadside vegetation and trees within the pine plantations of the Project. Views in this location tend to be more dramatic due to the regular closing and opening up of views across the landscape permitted by topography and vegetation.

Views from the south-west would be dependent on the visibility of turbines. This would be influenced by topography and vegetation and the context of the view where turbines are visible.

The range and nature of residential views will be dependent on the proximity and orientation of the dwelling towards the Project. For dwellings in the more elevated and hilly locations to the west, south and south-east of the Project, visibility will be further influenced by the orientation of the hillside and its proximity to the Project.

10. Landscape Mitigation

For wind energy projects landscape screening of views from sensitive viewing locations particularly residential dwellings is one method which can be applied to ameliorate visual impacts that are predicted to be high.

Landscaping is one mitigation option available for residential properties in proximity to the proposed Wind Farm. When compared to views from roads and working areas on farms and larger properties, views from dwellings and their immediate areas of private open space are relatively fixed allowing planting to be carefully designed to screen or reduce the visual dominance of wind turbines through filtering of views.

Many of the more established residential dwellings in the areas surrounding the Project include trees and extensive areas of canopy and screening vegetation. At these dwellings, existing vegetation can and will assist to screen or to filter views to the proposed wind farm.

The landscape patterns of the area also include many planted wind breaks and hedgerows, vegetation within road reserves and property boundaries, areas of managed timber plantations and conservations areas. This vegetation and its screening properties were discussed in various viewpoints in Section 8 of this report. It is clear from these examples that landscape mitigation is possible for the many residential dwellings in proximity to the Project.

Project imagery which includes photomontages, virtual reality and augmented reality prepared to show a range of viewing angles, distances and landscape settings that exist within the Project viewshed demonstrate how landscape mitigation can be effective at screening or filtering views towards the proposed wind turbines particularly from viewing locations that are near to the proposed turbines.

It must however be recognised that not all landowners may wish to screen views of turbines either through a preference to see the turbines, the potential to remove views or for other aesthetic reasons.

Landscape mitigation measures should be determined on a case by case basis in consultation with landholders to minimise adverse impacts. Such a process has occurred in past projects, after approval of the wind farm with advice and funding being supplied by the proponent.

All wind farm projects within Victoria are required to provide landscape mitigation for residential dwellings within an area where a high level of visual impacts is predicted. This area is based upon the overall height of the proposed turbines. For recent projects this distance has been established at a distance of 5.0 km from an approved turbine. This requirement translates into a condition within the Permit that requires the permit holder to implement measures to reduce the visual impact of turbines from all non-participant dwellings, both from their primary dwelling as well as the attached outdoor areas of private open space.

Those area that are eligible or required to be screened are those views from within dwellings and attached outdoor private open space such as:

- habitable rooms from within the dwelling
- primary or common dwellings entrances
- Artist's studios
- Adjoining outdoor private open space

The following section sets out the considerations and requirements for screening of views from residential dwellings.

10.1 Placement and Screening

Figure 10-1 shows an example of existing vegetation and placement of new landscaping to assist with screening views to turbines. This example is based on the owner's desire that the views to wind turbines should be screened or filtered.

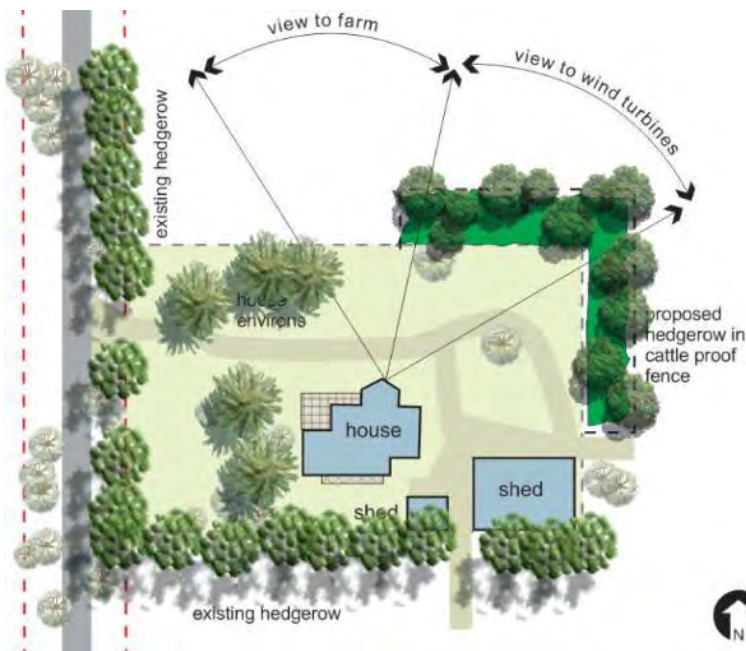


Figure 10-1: Potential Landscape Mitigation Measure

Alternatives may include careful placement of single trees or clusters to screen views to the nearest and most visually noticeable turbine.

10.2 Vegetation heights

Vertical view angles consider the overall height of the turbines and the distance of the dwelling to the turbine and this is relevant to determining the heights that vegetation will be required to achieve to screen views. Similar to the discussions on determining the Zones of Visual Influence discussed in Section 4 of this report, the view angle, or visual scale of turbines will change over distance. The greater the distance between a viewing location and a turbine the smaller the turbine will appear, similarly the closer the viewing location the larger the turbine will appear.

By analysing view angles for a 250 m height it is possible to determine the approximate height that landscape mitigation would be required to achieve to ameliorate visual impacts from residential dwellings.

To be conservative, the following will describe view angle at a distance of 1.0 km from a turbine and how this translates to landscape mitigation. Figure 10-2 shows the view angle for a 250 m high turbine at 1.0 km. By analysing view angles for a 250 m turbine it is possible to gauge the approximate height that landscape mitigation would be required to achieve to ameliorate visual impacts from residential dwellings.

For dwellings located within a Bushfire Management Overlay (BMO) it will be important to consider design requirements such as canopy separation, defendable space and distance from the dwelling. For these reasons, vegetation has been shown at varying distances from the dwelling assuming flat terrain. These heights are shown in Table 10.1.

Table 10.1: Landscape Mitigation Indicative Heights

Nearest Turbine Distance	Vegetation height at 20m from dwelling	Vegetation height at 30m from dwelling	Vegetation height at 50m from dwelling
1.0km	6.6m	9.2m	14m
1.5km	5.0m	6.6m	10m
2.0km	4.1m	5.3m	7.8m
2.5km	3.6m	4.6m	6.6m
3.0km	3.4m	4.1m	5.9m
3.5km	3.1m	3.8m	5.2m
4.0km	2.8m	3.5m	4.7m
4.5km	2.8m	3.3m	4.4m
5.0km	2.6m	3.1m	4.1m
5.5km	2.5m	3.0m	3.9m
6.0km	2.5m	2.9m	3.7m

Figure 10-2 shows an example of the vegetation heights described in Table 10.1.

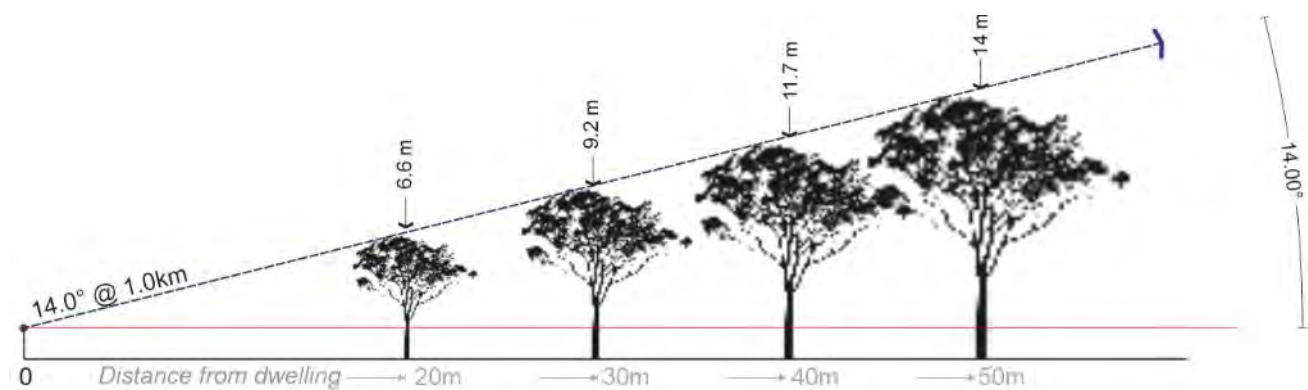


Figure 10-2: Vegetation height requirements

Distance, elevation, topography and landscape setting will vary from dwelling to dwelling. The above figures assume a flat plain.

Figure 10-3 shows an example of how this would vary from a turbine on an elevated hill or a house on an elevated hill with a view to a turbine in the valley.

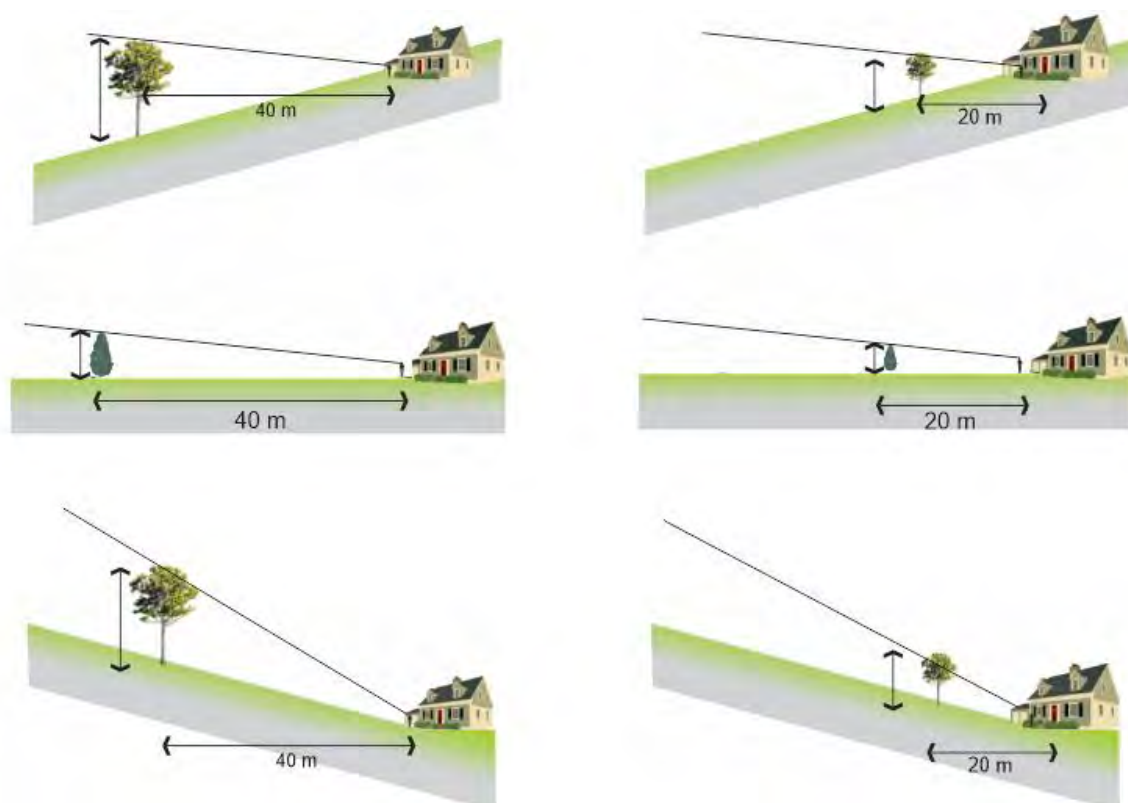


Figure 10-3: Landscape mitigation view angle examples

10.3 Bushfire considerations

For properties located within the Bushfire Management Overlay (BMO), it is important that any landscape mitigation does not increase bushfire risk to the dwelling and broader landscape. The BMO is triggered by the presence of tree canopy in excess of five hectares in size. Any property within the BMO, is in close proximity to an area of vegetation that could generate extreme bushfire behaviour.

To ensure there is no increase in bushfire risk to an existing dwelling, any landscape mitigation should only consist of trees and shrubs that are in a single row and not introduce multiple layers of vegetation (e.g. canopy, mid storey and understorey).

Where possible, plantings against existing forested areas should be avoided.

If landscape mitigation is required, a 20-metre buffer between any landscape mitigation planting and existing vegetation, and a 10-metre buffer from the residence should be maintained.

10.4 Other considerations

The preceding chapters and supporting photographs demonstrate that vegetation in the region is capable of exceeding the heights required to screen or filter the proposed 250m high turbines.

However, as also shown in the preceding residential assessment, views and visual impact are unique and diverse from property to property and vary across the site and there may also be constraints or locations where landscape screening may not be suitable or successful. For these reasons, landscape screening would need to be considered on a case by case basis.

11. Conclusion

The preceding analysis has shown that the project is in an area that can accommodate the visual change of the Proposed Delburn Wind Farm and will not be detrimental to the views, character and amenity of the area within the viewshed of the Project.

The Project is proposed to be located entirely within an area that is used for managing timber and forestry plantations and will connect directly into an existing high voltage transmission line. The land to the north east of the site is occupied or in transition from open-cut coalmines and coal fired power stations with supporting infrastructure and transmission lines. The remaining land in this area, part of which is used for farming and agriculture is retained with a special use zone applied to areas reserved for future exploration and mining.

The majority of the area to the east is used for farming, which is not a sensitive use. Views from these areas towards the project are influenced by existing vegetation within the surrounding road network, farming and conservation areas.

Closer to the site and in the areas to the south and east comprises a folded and complex landscape where views change dramatically from clear long views to completely screened. These changes occur over very short distances.

Section 4 of Clause 52.32 (Wind Energy Facility) requires an application to provide a site and context analysis including specific information relevant to landscape and visual impact.

Although not specifically required by Clause 52.32 we have also included views from 24 local roads within and around the project and project viewshed. The inclusion of these views provides useful context and further granularity to understand and consider the impacts to the local community. This analysis also gives further detail and information upon which to consider the intricacies of the landscape and the potential views and visual impact that might be experienced from the residential dwellings where access may not have been granted.

The following summary sets out the conclusions for views and visual impacts as required by Clause 52.32.

11.1 Townships and urban areas

Views from most locations within the nearby towns and locality will be filtered or screened by a combination of topography, vegetation or buildings and other structures.

Views are typically limited to the edges of townships or areas such as recreation reserves that allow for clear views over large open areas. Where visible, the turbines would not be dominant features due to the scale and extent of vegetation in most views towards the Project.

The overall visual impact from these majority of the areas would be **Low - Negligible**.

There may be views from residential dwellings where breaks in vegetation have been created to take in specific views or aspects. Views from these locations would be considered in a more detailed assessment should they be of concern to the individual owners.

11.2 National Parks, State Parks, conservation and recreation areas and walking tracks

There are many kilometres of recreational trails within the viewshed and areas that immediately surround the project and include walking tracks, cycling routes and rail trails.

Outside of towns and built-up areas, walking trails tend to be located in heavily vegetated areas such as the Lyrebird Forest Walk, Morwell National Park and the trail to Petersons Lookout. Views along these trails tend to be confined to the trail and immediate vicinity by the extensive canopy vegetation and supporting bushland.

Rail trails comprise well-made paths, gentle grades and the ability to cover considerable distances for walkers, running and cycling. The Grand Ridge Rail Trail runs along part of the eastern and southern boundaries of the site between Boolarra and Mirboo North. Many views from the trail are filtered or screened by topography, vegetation or a combination of both. The Gippsland Plains Rail trail further to the north provides wide, open and long-distance views over large areas of cleared flat farmland. When looking towards the Delburn Wind Farm from many locations along Gippsland Plains Rail trail, views include operating power stations, powerline infrastructure and many other constructed elements. The turbines would be visible; however, they would be at such a distance and in a context that they would not be visually dominant features. There will be locations where views to the turbines are possible where a break or gap in vegetation permits. Turbine visibility would form part of the dynamic views afforded along the trail. There will be limited to no views from key trail locations such as entrances or designated stops.

Views from elevated locations such as Mt Tassie to the south-east, Tyers and Petersons lookout to the north enable long views over the Latrobe Valley. In most directions, views include a tapestry of cleared farmland, towns and developed areas, coal-fired power stations and the open-cut coalmines within the valley and supported by a backdrop of vegetated hills and plantation forests.

Further, views from elevated lookouts are often modified by atmospheric conditions that can limit or filter long views.

For these reasons, the overall visual impact of Recreational Trail Viewpoints is assessed as **Negligible**.

11.3 Tourist routes

Overall, the visual impact of the Project in views from Tourist Routes and Highways will be assessed as **Low**. This is due to the majority of views towards the Project being limited by vegetation within roadsides, plantation areas and adjoining farming properties and screening afforded by nearby and surrounding topography. Views and visual impact would be further modified by the presence of other infrastructure which at times will be noticeable if not more dominant than the presence of the proposed wind turbines.

Highways and Tourist Routes within the viewshed include Grand Ridge Road, a local tourist route that runs south from 10km south of Warragul to Mirboo North and then heads south-east, and the Strzelecki Highway which runs through the middle of the Project. When travelling south, views along the Strzelecki Highway will be diverse and range from open clear views which include several turbines, to large sections encapsulated by roadside vegetation, with extensive timber plantations beyond.

Views from sections along the Strzelecki Highway towards the northern end of the Project will include turbines in long-range views also contain the elevated views of Mt Baw Baw and the national park to the north, high-voltage transmission lines and timber plantations. While these views may be currently available, timber in the adjoining plantation areas will filter and screen these views.

11.4 Major roads

Overall, the visual impact of the Project in views from major roads would be assessed as **Low-Moderate**. This is due to the majority of views towards the Project being limited by vegetation within roadsides, plantation areas and adjoining farming properties and screening afforded by nearby and surrounding topography.

Major roads include Hazelwood Road and Monash Way to the east and the Morwell – Thorpdale Road which runs through the part of the northern end of the site. Major roads are frequently used by locals as they go about their daily lives in the area and have a moderate number of road users.

Major roads throughout the viewshed vary from open clear views towards the Project to folding undulating topography that open and close to views towards the Project. Views in Section 8.4 have highlighted the ability for vegetation to filter and screen views to the Project from major roads within the area.

11.5 Local Roads

The assessment of views and visual impacts from local roads reviewed 24 locations from a range of distances and viewing angles towards the Project. The assessment of these views concluded that overall, the visual impact from local roads would be low. This assessment considered the viewer numbers, landscape sensitivity, availability and duration of views, and was supported by imagery from the site, photomontages and virtual reality imagery presented to the community at the community consultation days.

Views and visibility of the proposed turbines from local roads will vary greatly depending on location and proximity to the Project. The local road network is located within a landscape of great diversity ranging from views over cleared flat farmland where long views are available across the valley floor and plain, through to confined views from the tightly folding landscape of the vegetated elevated hills.

Local roads within the area to the west tend to be more confined due to the rolling hills, extensive roadside vegetation and trees within the pine plantations of the Project. Views in this location tend to be more dramatic due to the regular closing and opening up of views across the landscape permitted by topography and vegetation.

More broadly the views from areas to the east of the project that are near or within the SUZ1 would be less sensitive to visual change due to the presence of electrical generating and distributing infrastructure, there are however sensitive views to elevated features such as Strzelecki Ranges and Mt Baw Baw.

Overall visual impact from local roads is assessed as Low. This is in part due to viewer numbers and the visibility of turbines which would be influenced by topography and vegetation and the context of the view where these are available.

11.6 Residential dwellings

The greatest potential for visual impacts would be from individual dwellings located in close proximity to the Project. The majority of these dwellings are located in and around the same hills on which the turbines are located. The preceding assessment has shown that views from these areas are diverse and visual impact changes dramatically over a short distance. There will be views from some dwellings that will have a high visual impact where neighbouring dwellings who are at a similar distance to the proposed turbines will have no visibility at all. This is due to the topography of the landscape in which the dwellings are located, the orientation and proximity to vegetation both within the private realm, roadsides, plantations and forestry areas.

The SAA shows that there is greater theoretical visibility for areas to the east in the clear flat plains near to Hazelwood and Yinnar. From areas to the north of the Project such as Moe, Traralgon, Coalville and Narracan visibility is largely confined by topography. The SAA in these locations demonstrates that many dwellings in these areas will have little to no visibility.

Further, the SAA also shows that although there are a number of residential dwellings within 6.0km of a turbine many of these will also have no visibility due to topography. From those dwellings where it has been demonstrated that there is the potential to see turbines, views from many of these dwellings are further modified by the presence of vegetation within the surrounding landscape.

11.7 Other considerations

The South Gippsland Planning Scheme Clause 21.13 Infrastructure *Objective 2 seeks to ensure that the use of alternative energy technology does not detrimentally affect the surrounding environment. Specifically, strategy 2.2 discourages tall structures on ridgelines or in view corridors.*

There were originally 5 turbines located within this area in the Concept layout. 2 turbines have been removed in this area within the current layout (Version 3.5). This clause is unique to the South Gippsland Planning Scheme and does not reside in any of the other planning schemes.

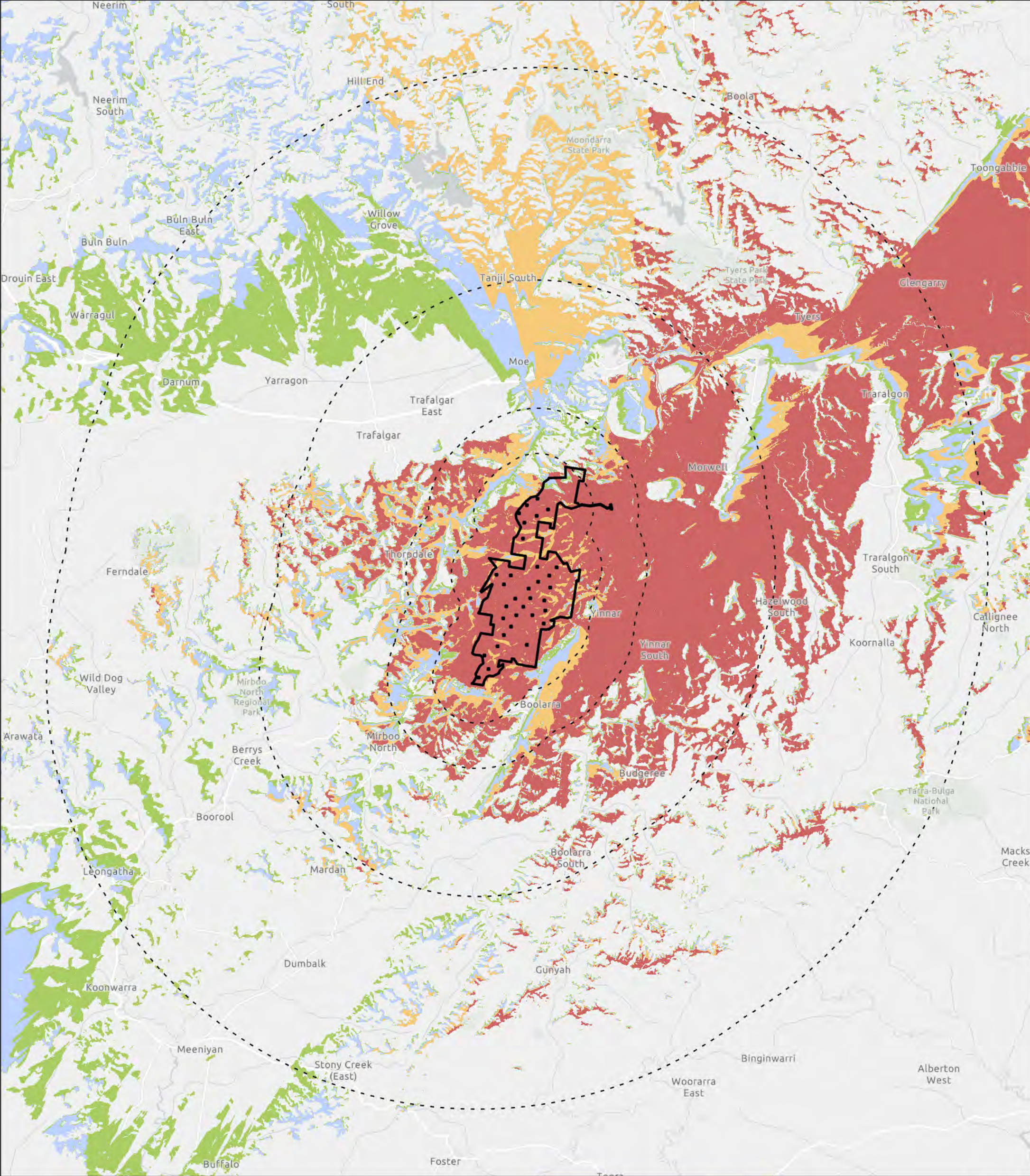
Further to the planning review, several viewpoints were selected within the South Gippsland Council area to consider the impacts of this clause. These included viewpoints H5-H10, M10, M11, L15, L16, T8 and recreational trail viewpoints RT1b, RT1c and RT2.

Views and legibility of a ridgeline varies depending on viewer location, aspect and angle. This is evidenced by the views within the areas near to Boolarra, where the township is in close proximity to the windfarm, however the turbines would not be visible, due to the topography to the east which appears as a ridgeline and would create a visual shadow and screen the turbines. From locations where the elevated hills appear as a ridgeline these views are from flatter areas generally to the east and north east of the project in locations such as Yinnar and the lower lying areas adjacent to the Morwell River. These areas are located within the Latrobe Shire and outside areas that this Clause applies.

Views and visibility of the proposed turbines from within the South Gippsland Council area will vary greatly depending on location and proximity to the Project. The views are located within a landscape of great diversity ranging from views over cleared farmland, through to confined views from the tightly folding landscape of the vegetated hills. Where visible through gaps in vegetation and topography, the turbines would not have a detrimental impact on ridgelines or view corridors within this area. Furthermore, there are no locations from the affected areas of the South Gippsland Shire where the area on which the turbines are located is legible as a ridgeline.

Appendix A. Seen Area Analysis

Appendix B. Photomontages



Legend

- Wind turbine location
- - - ZVI
- ▭ Site extent

Wind Turbine Visibility

- Zone A (one or more entire wind turbine visible)
- Zone B (entire rotor swept path of one or more wind turbine visible)
- Zone C (at least half of the rotor swept path of one or more wind turbine visible)
- Zone D (any part of one or more wind turbine is visible)

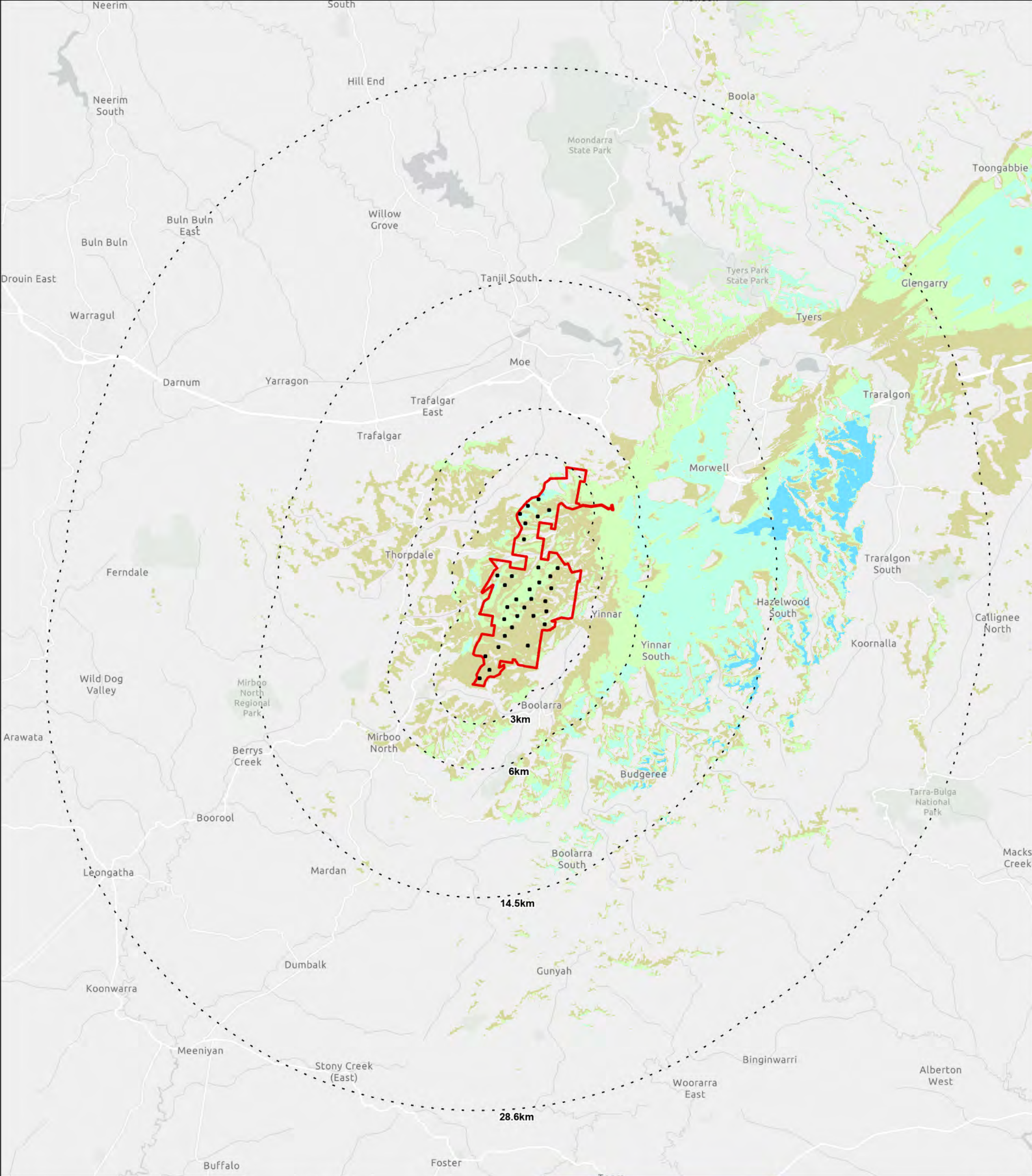


IS279700
Turbine Layout Version 3.5
GDA 1994 MGA Zone 55

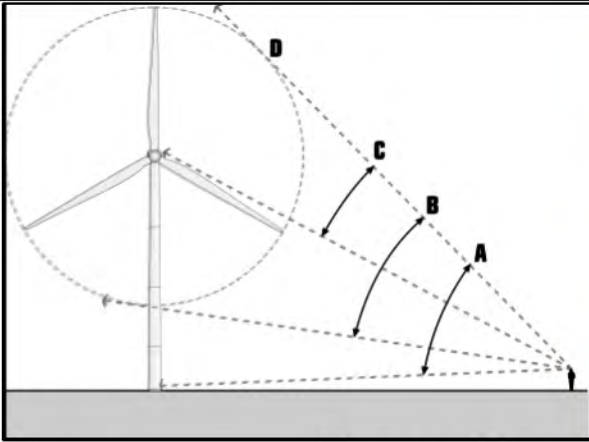
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Kilometres

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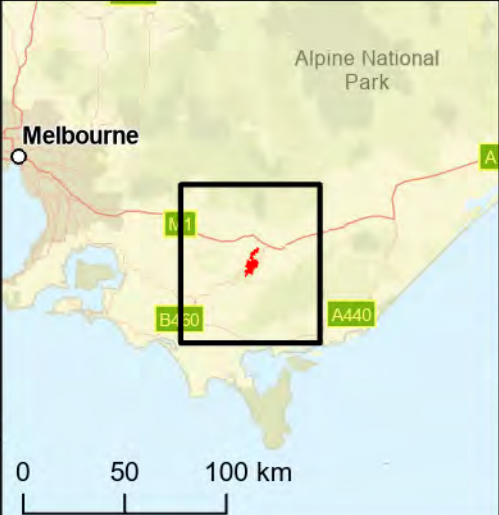
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- Wind turbine location
 - ZVI
 - Site extent
- Turbine Visibility**
- Number of visible turbines
- ≤ 0 (no colour)
 - ≤ 8
 - ≤ 16
 - ≤ 24
 - ≤ 33



Jacobs



IS279700

Turbine Layout Version 3.5

GDA 1994 MGA Zone 55

0 5 10

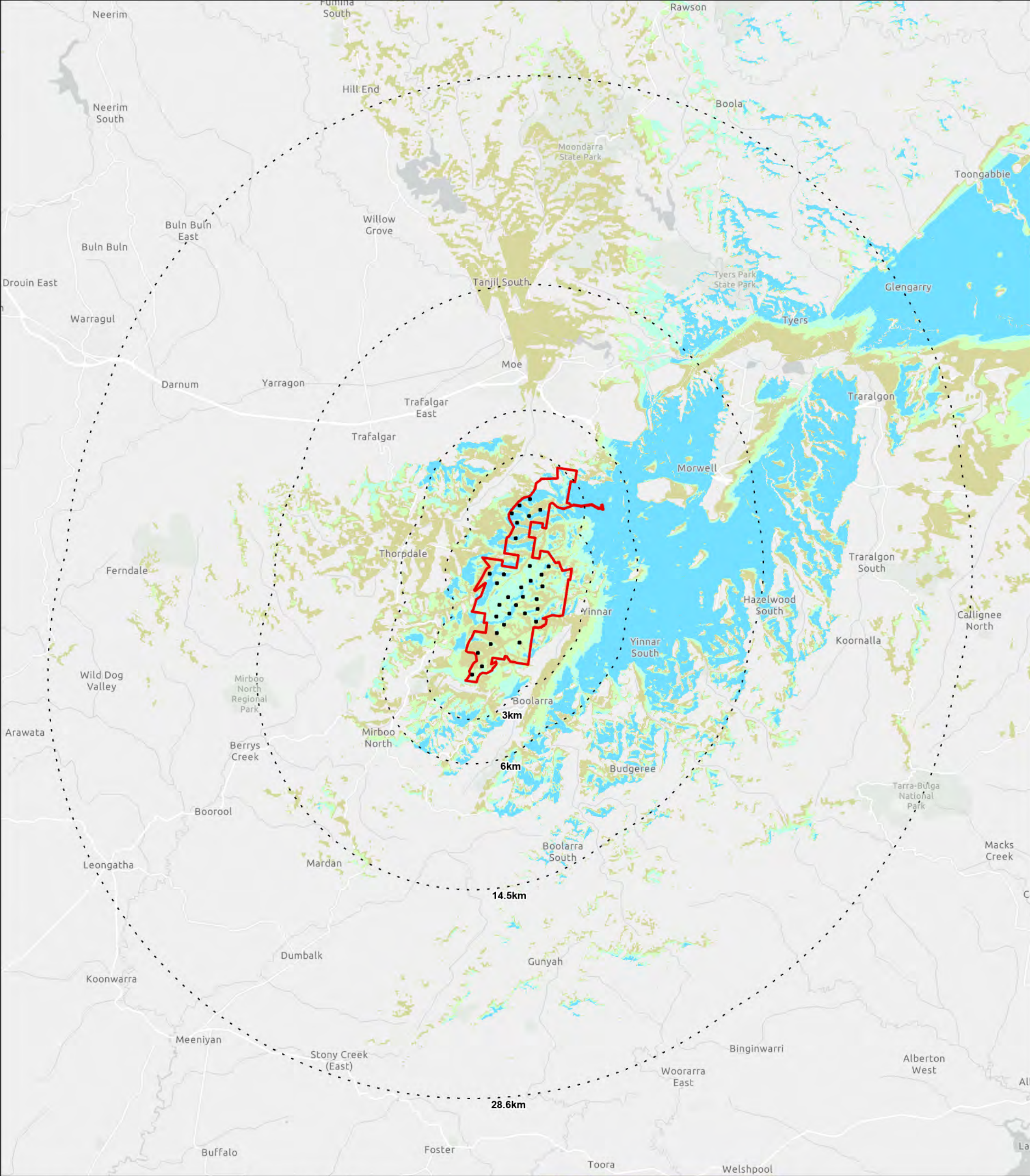
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DATA SOURCES

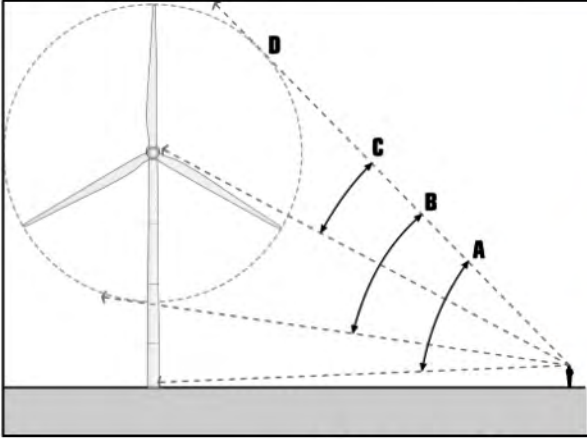
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- Wind turbine location
 - ZVI
 - ▭ Site extent
- Turbine Visibility**
- Number of visible turbines
- ≤ 0 (no colour)
 - ≤ 8
 - ≤ 16
 - ≤ 24
 - ≤ 33



Jacobs



IS279700

Turbine Layout Version 3.5

GDA 1994 MGA Zone 55

0 5 10

Kilometres

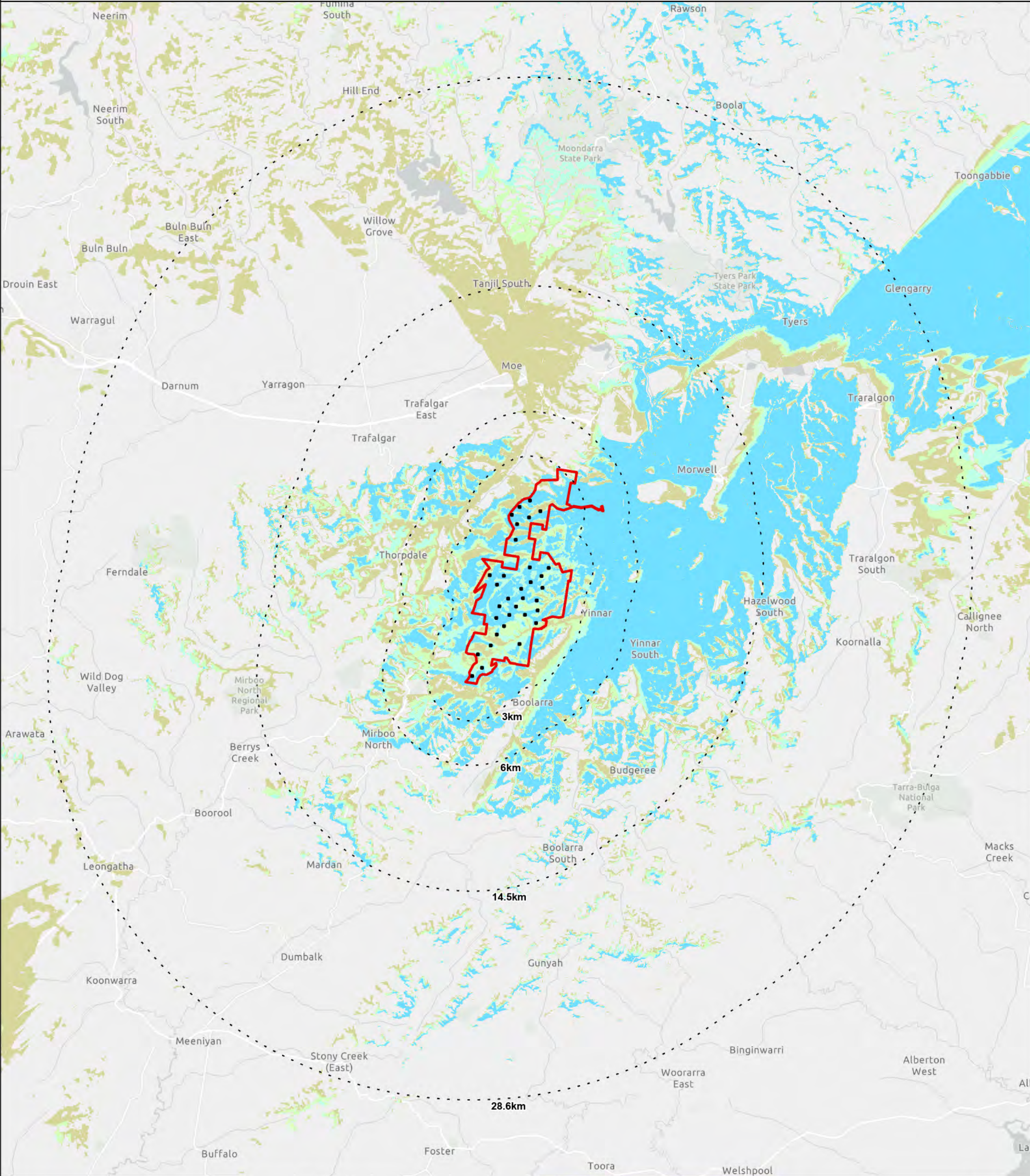
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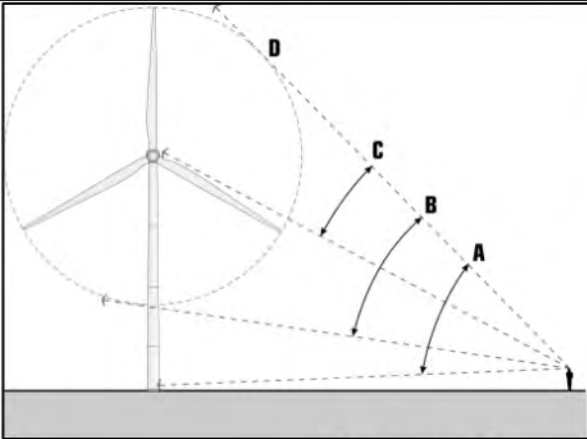


- Wind turbine location
- ZVI
- Site extent

Turbine Visibility

Number of visible turbines

- ≤ 0 (no colour)
- ≤ 8
- ≤ 16
- ≤ 24
- ≤ 33



Jacobs



IS279700

Turbine Layout Version 3.5

GDA 1994 MGA Zone 55

0 5 10

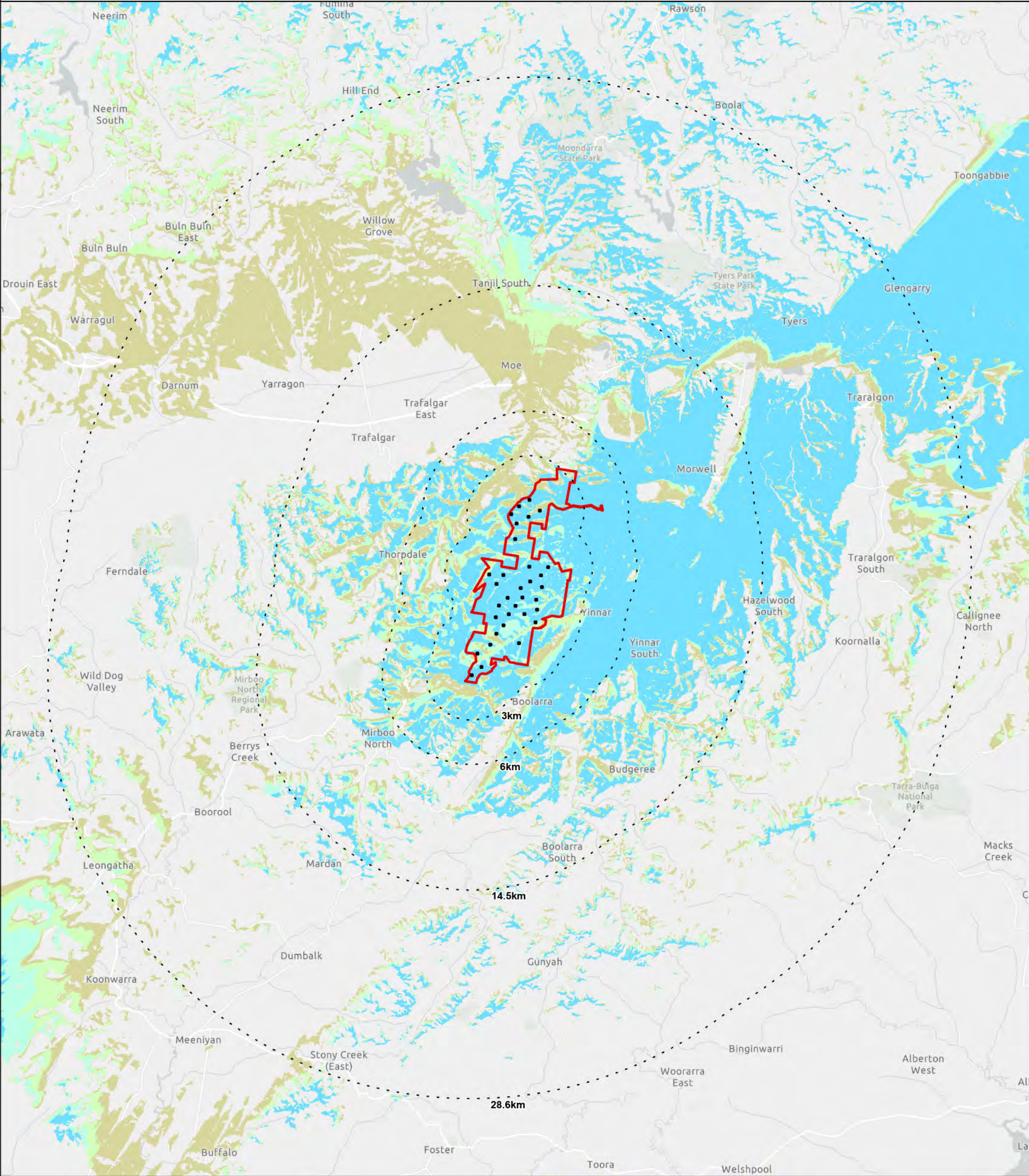
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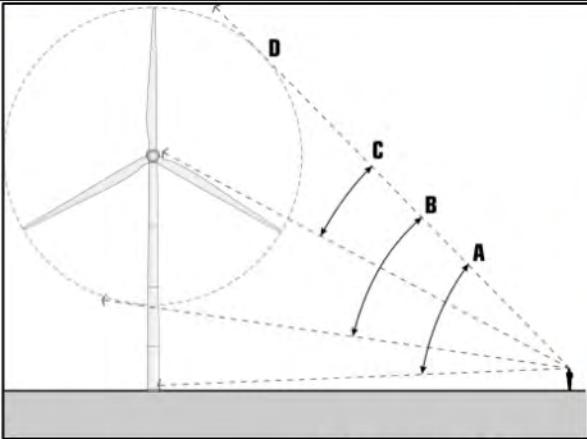
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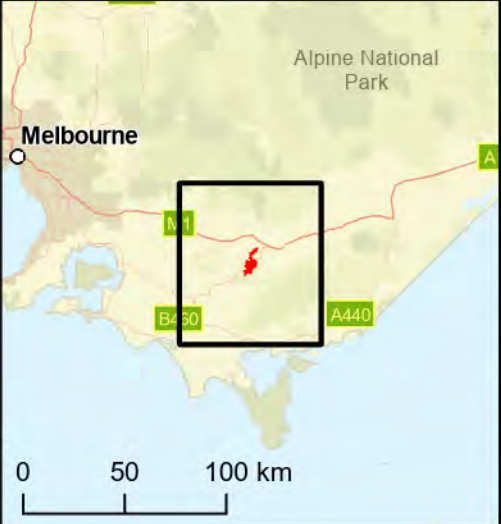
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- Wind turbine location
 - ZVI
 - Site extent
- Turbine Visibility**
- Number of visible turbines
- ≤ 0 (no colour)
 - ≤ 8
 - ≤ 16
 - ≤ 24
 - ≤ 33



Jacobs



IS279700

Turbine Layout Version 3.5

GDA 1994 MGA Zone 55

0 5 10

Kilometres

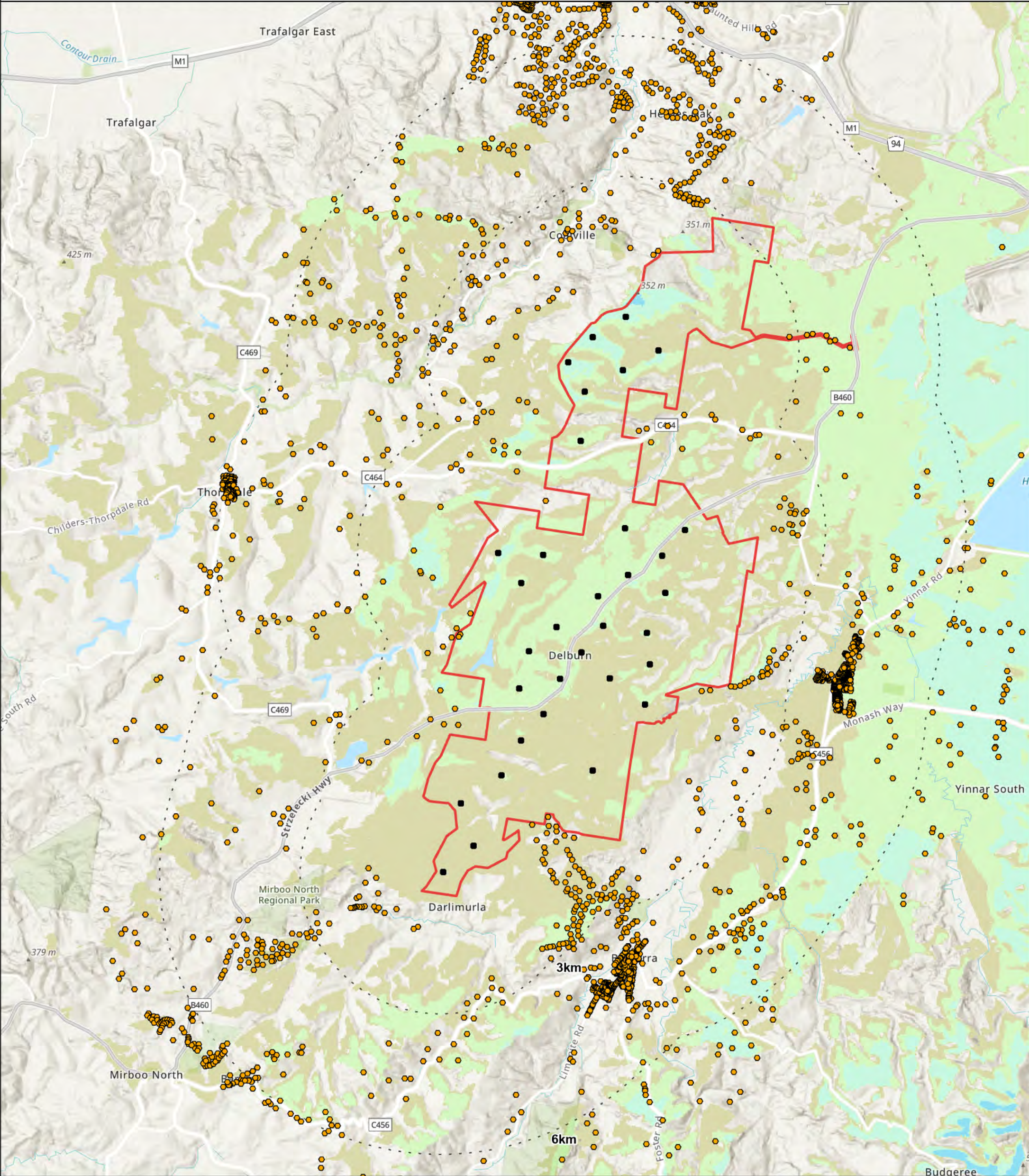
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- Dwellings
- Wind turbine location
- ZVI
- Site extent

Turbine Visibility

Number of visible turbines

- ≤ 0 (no colour)
- ≤ 8
- ≤ 16
- ≤ 24
- ≤ 33

Jacobs

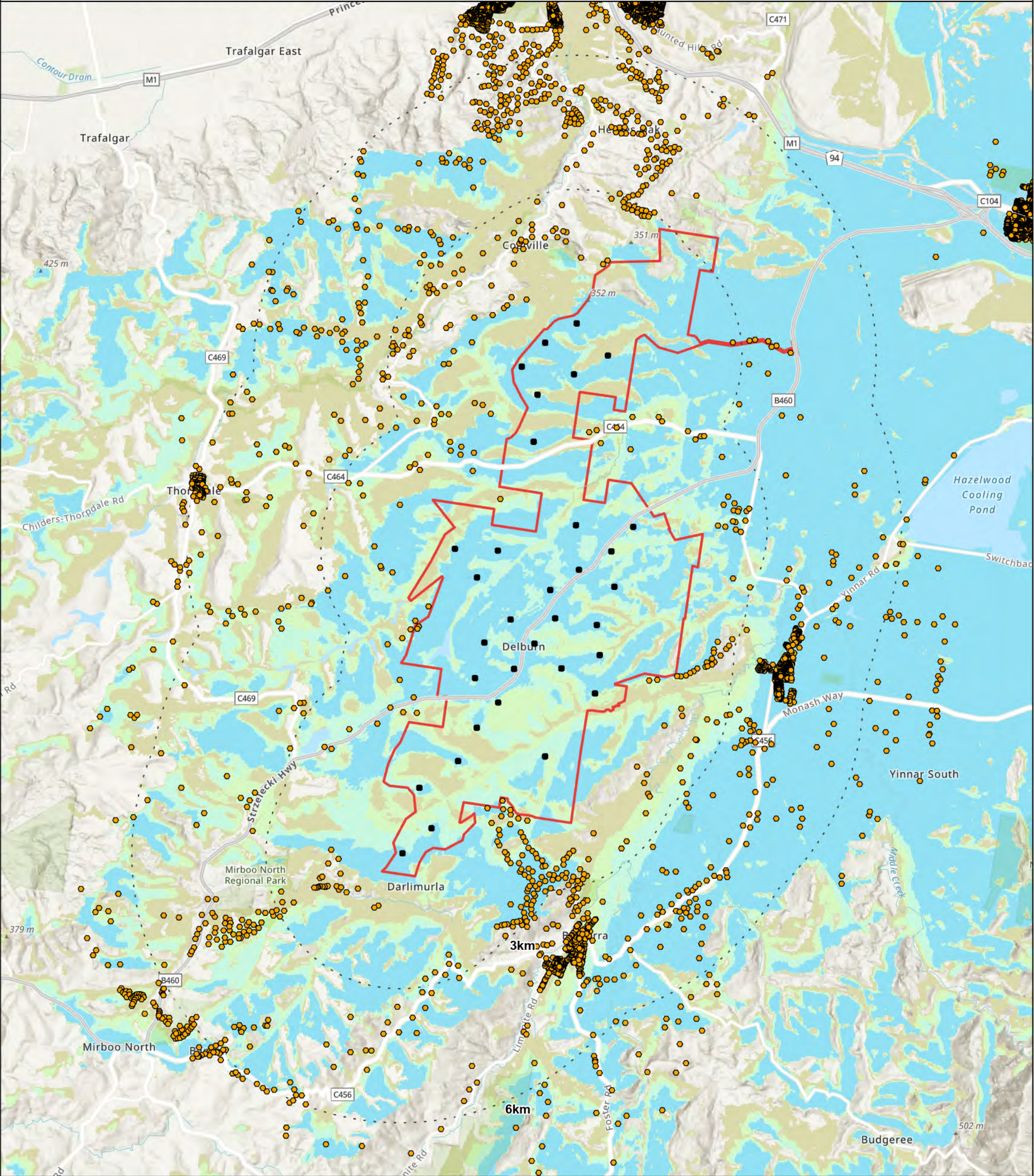
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GDA 1994 MGA Zone 55

0 1.5 3
Kilometres

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- Dwellings
- Wind turbine location
- ZVI
- Site extent

Turbine Visibility

Number of visible turbines

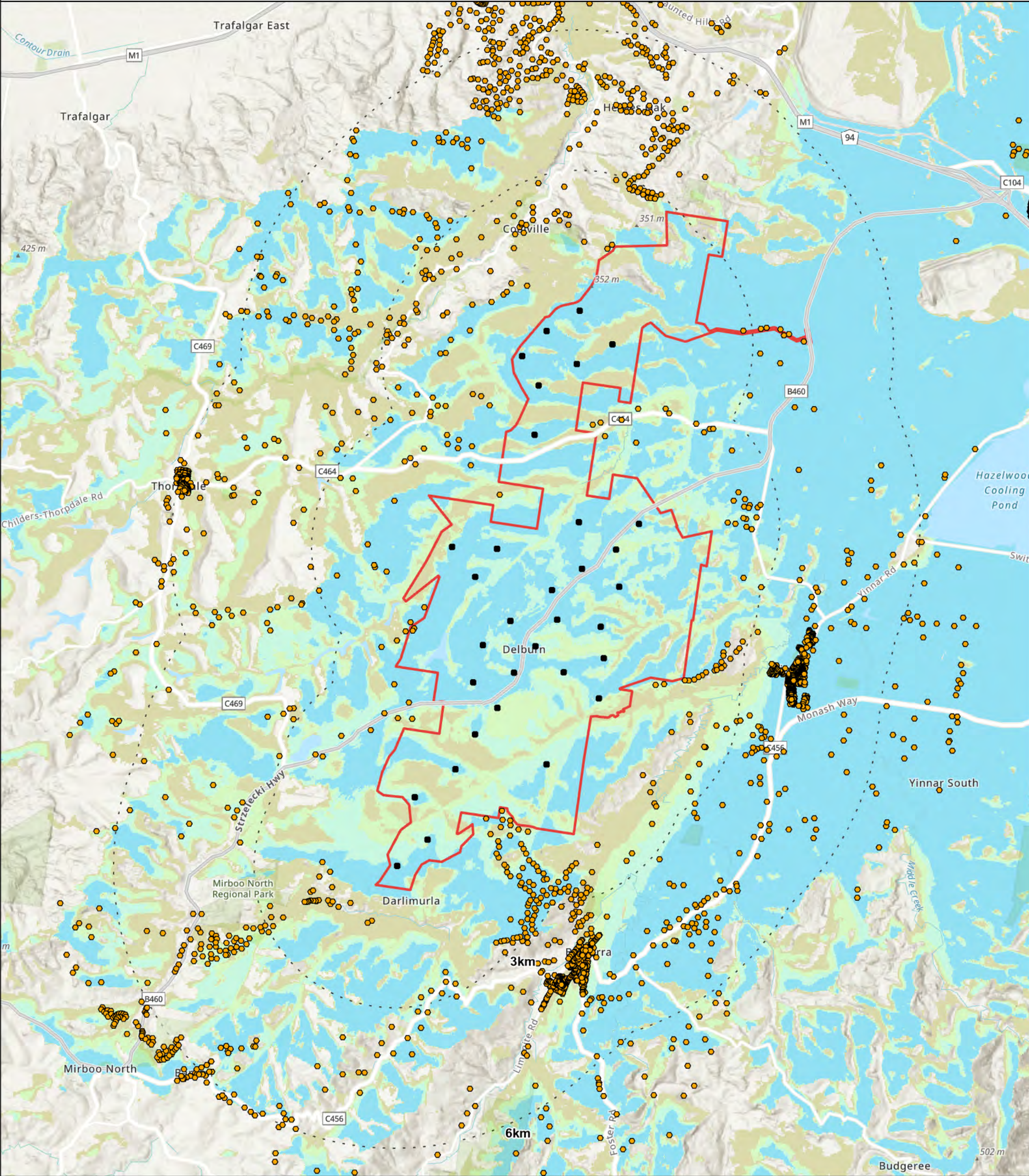
- ≤ 0 (no colour)
- ≤ 8
- ≤ 16
- ≤ 24
- ≤ 33

IS279700
Turbine Layout Version 3.5
GDA 1994 MGA Zone 55

0 1.5 3
Kilometres

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- Dwellings
- Wind turbine location
- ZVI
- Site extent

Turbine Visibility

Number of visible turbines

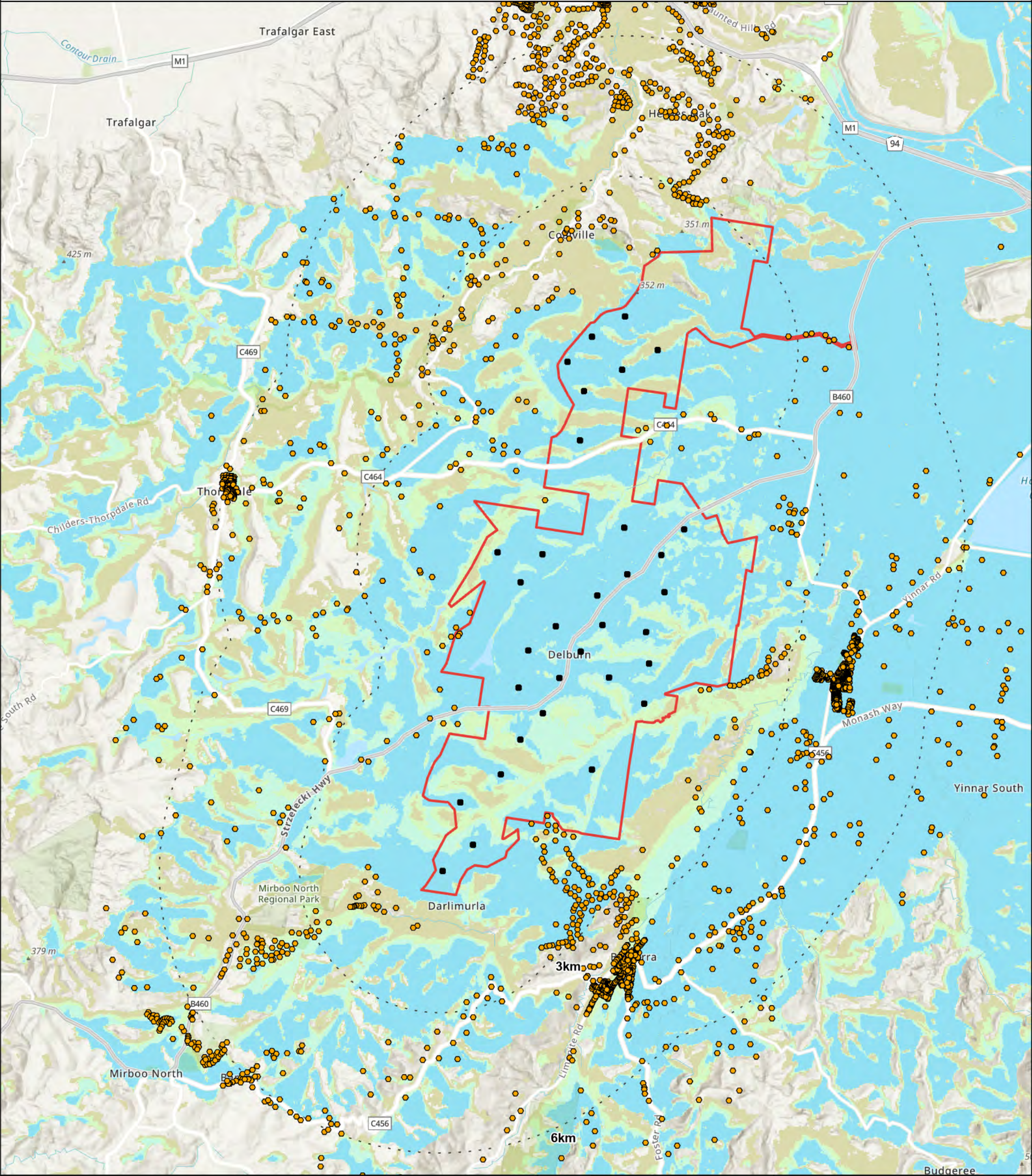
- ≤ 0 (no colour)
- ≤ 8
- ≤ 16
- ≤ 24
- ≤ 33

IS279700
Turbine Layout Version 3.5
GDA 1994 MGA Zone 55

0 1.5 3
Kilometres

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- Dwellings
- Wind turbine location
- ZVI
- Site extent

Turbine Visibility

Number of visible turbines

- ≤ 0 (no colour)
- ≤ 8
- ≤ 16
- ≤ 24
- ≤ 33

IS279700
Turbine Layout Version 3.5
GDA 1994 MGA Zone 55

0 1.5 3
Kilometres

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VIEWPOINT H1: STRZELECKI HIGHWAY - MORWELL RIVER BRIDGE

(GPS 55 H, 443821m E, 5767692m S)



Existing view

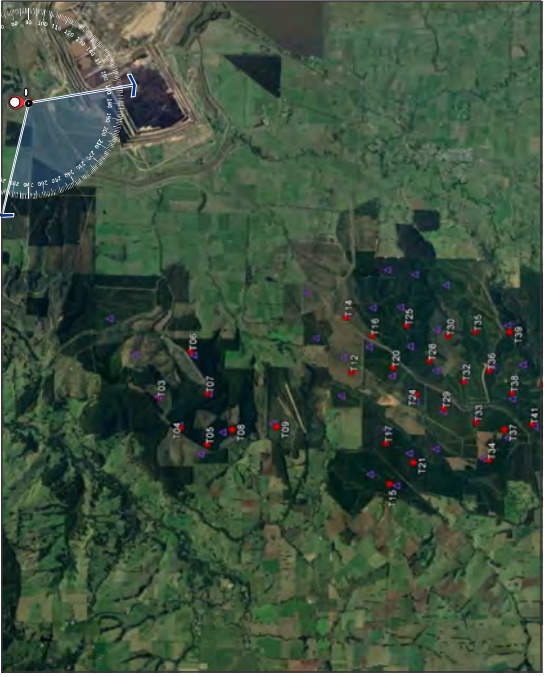


Photomontage - Revised Layout (V2.1)

See Sheet 2

- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T06) 7.0km



Viewpoint Map

VIEWPOINT H1: STRZELECKI HIGHWAY - MORWELL RIVER BRIDGE



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T06) 7.0km

VIEWPOINT H1: STRZELECKI HIGHWAY - MORWELL RIVER BRIDGE

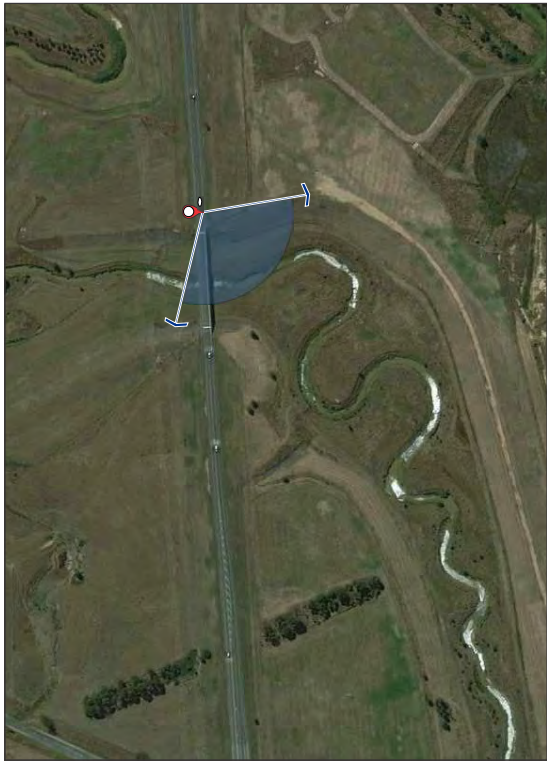
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Existing view



Labeled Turbines - Revised Layout (V2.1)

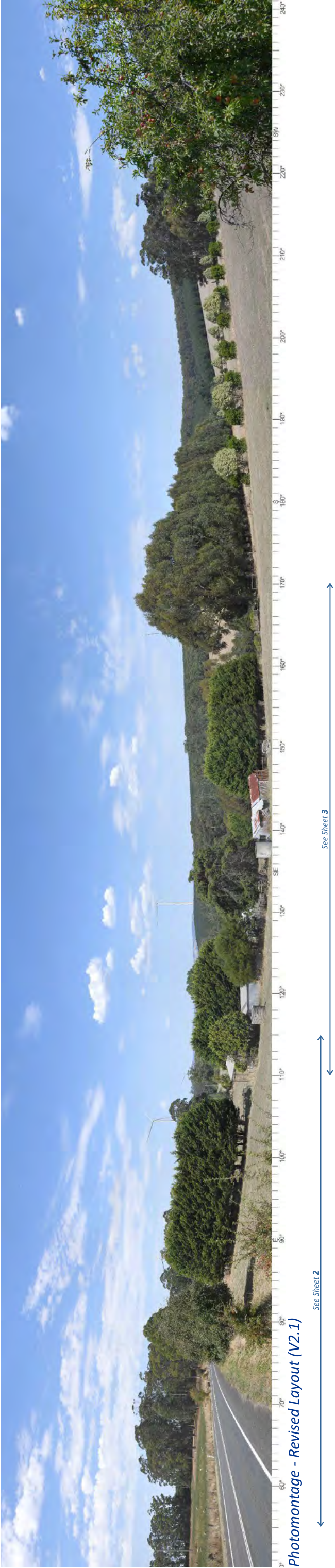


- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T06) 7.0km



Viewpoint Map



See Sheet 2



See Sheet 3



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine
Revised Layout - (T42) 1.8km

VIEWPOINT H5: STRZELECKI HIGHWAY



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T42) 1.8km



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T42) 1.8km

VIEWPOINT H5: STRZELECKI HIGHWAY



VIEWPOINT: M3 MONASH WAY

(GPS 55 H, 444454 m E, 5757011m S)



See Sheet 2



See Sheet 3



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T35) 7.4km W



Viewpoint Map



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T35) 7.4km W**

VIEWPOINT: M3 MONASH WAY

(GPS 55 H, 444454 m E, 5757011m S)



Existing view



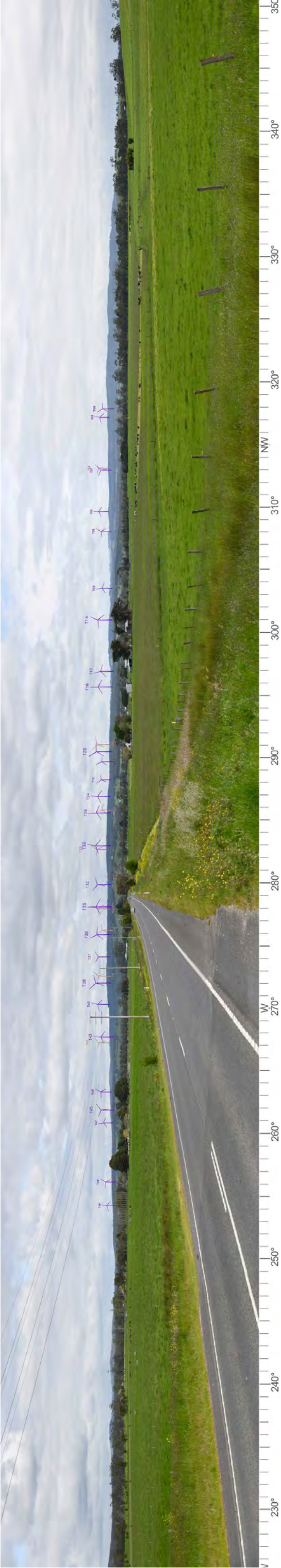
Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T35) 7.4km W**

VIEWPOINT: M3 MONASH WAY

(GPS 55 H, 444454 m E, 5757011m S)



Labeled Turbines - Revised Layout (V2.1)



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T35) 7.4km W

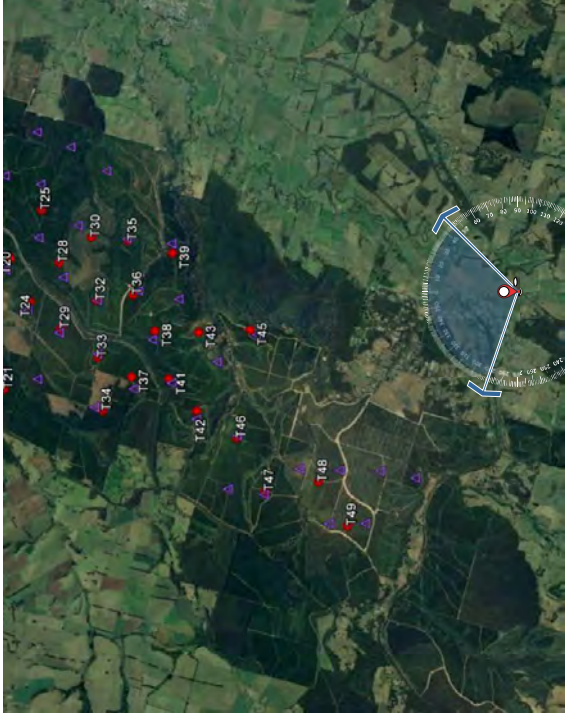


Existing view



Photomontage - Revised Layout (V2.1)

See Sheet 2

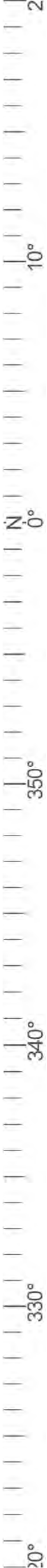


- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T45) 4.7km

VIEWPOINT M6: MONASH WAY

(GPS 55 H, 437001m E, 5751214m S)



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T45) 4.7km

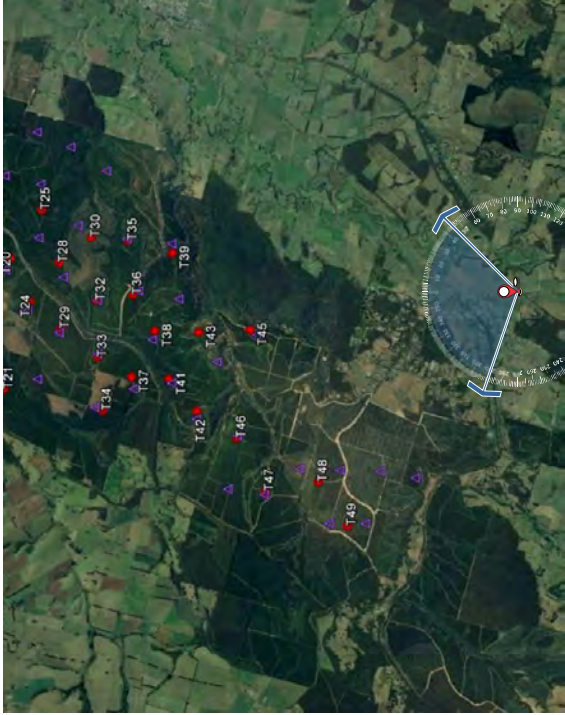
Viewpoint Map



Existing view



Labeled Turbines - Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T45) 4.7km



Existing view



Photomontage - Revised Layout (V2.1)

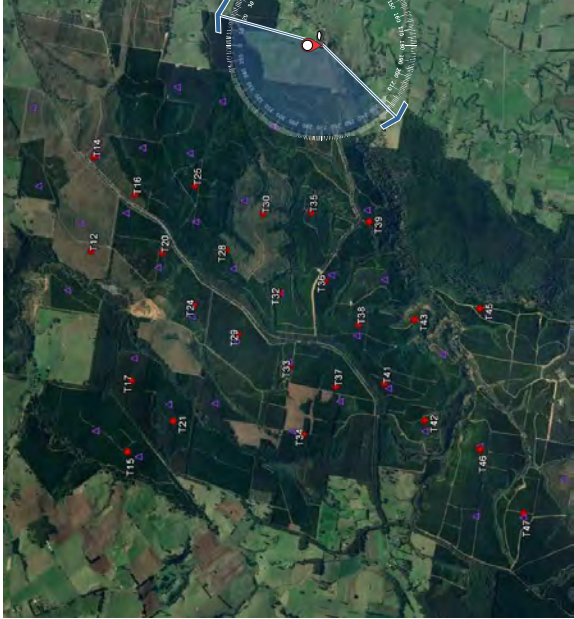
See Sheet 2



See Sheet 3



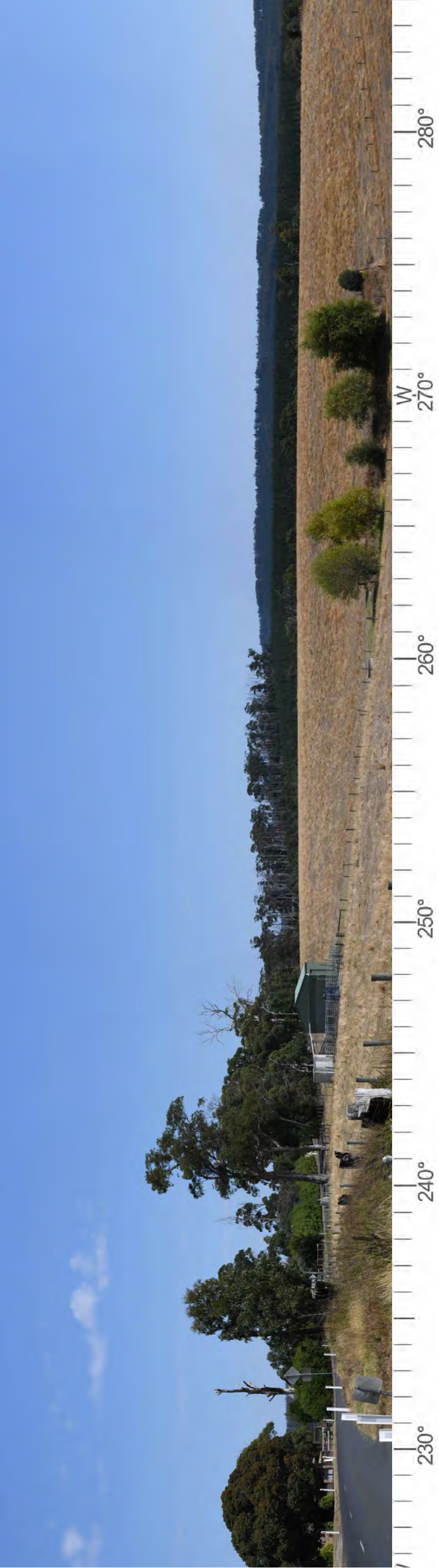
See Sheet 4



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T35) 2.2km

VIEWPOINT L7: CREAMERY ROAD



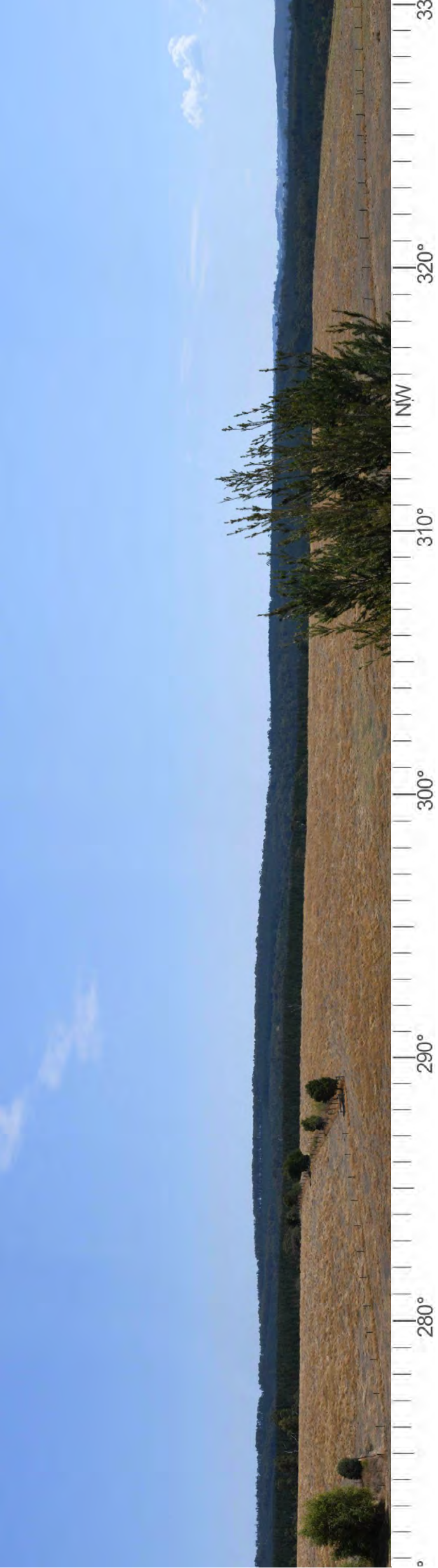
Existing view



Photomontage- Revised Layout (V2.1)



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T35) 2.2km



Existing view



Photomontage- Revised Layout (V2.1)



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T35) 2.2km

VIEWPOINT L7: CREAMERY ROAD

(GPS 55 H, 439335m E, 5757941m S)



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T35) 2.2km



Existing view



Labeled Turbines - Revised Layout (V2.1)



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T35) 2.2km

VIEWPOINT L10: BUNDERRA DRIVE

(GPS 55 H, 435501m E, 5752853m S)



Existing view



Photomontage - Revised Layout (V2.1) See Sheet 2 See Sheet 3



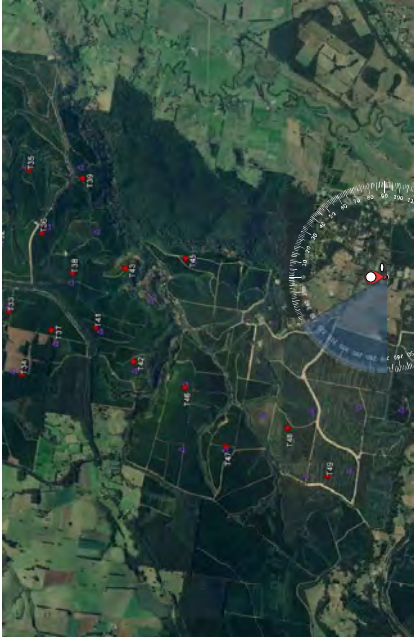
- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T48) 2.6km



Existing view



Photomontage- Revised Layout (V2.1)



Viewpoint location and orientation
Turbine location - Concept Layout
Turbine location - Revised Layout
Distance to Nearest Turbine
Revised Layout - (T48) 2.6km



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T48) 2.6km

VIEWPOINT L10: BUNDERRA DRIVE

(GPS 55 H, 435501m E, 5752853m S)



Existing view



Labeled Turbines - Revised Layout (V2.1)



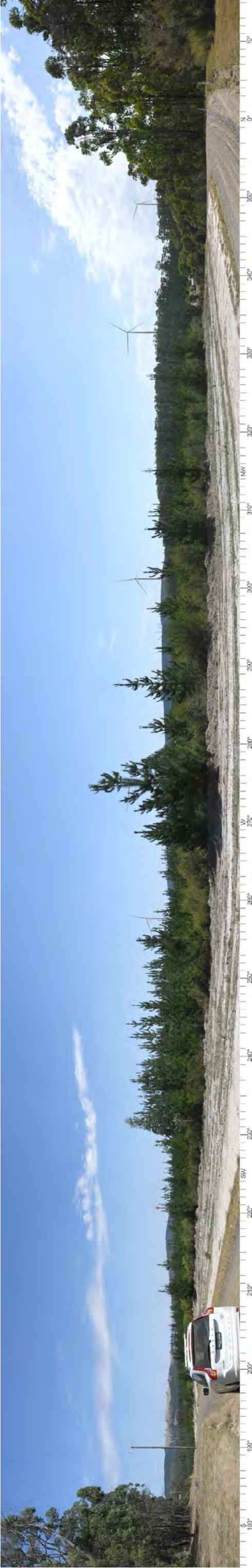
- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T48) 2.6km

VIEWPOINT L14: TODDS ROAD

(GPS 55 H, 434710m E, 5754128m S)



Existing view



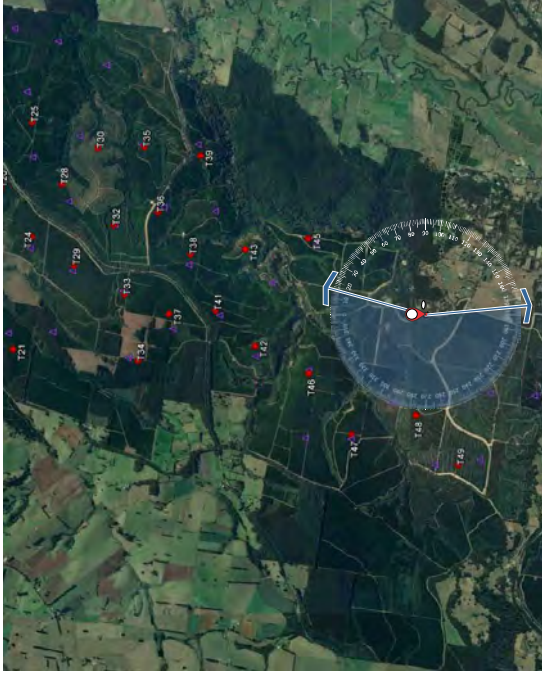
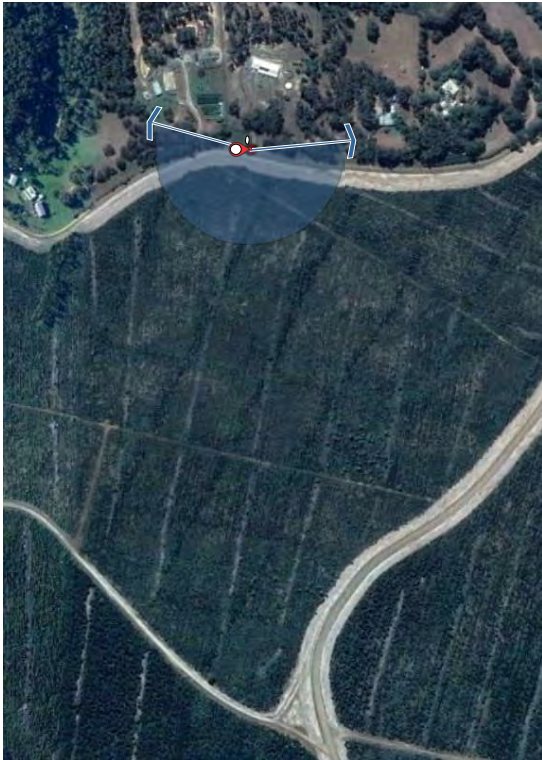
Photomontage - Revised Layout (V2.1)

See Sheet 2

See Sheet 3

- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T48) 1.4km



Viewpoint Map

VIEWPOINT L14: TODDS ROAD



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T48) 1.4km



Existing view



Photomontage- Revised Layout (V2.1)



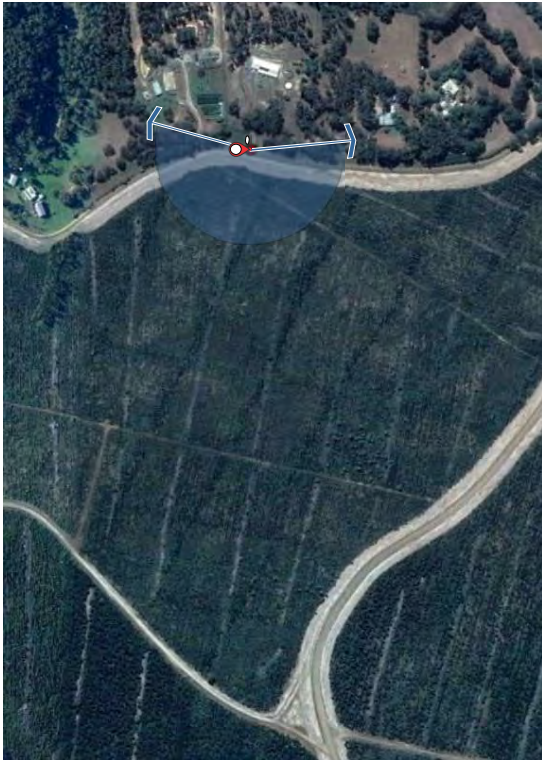
- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T48) 1.4km**



Existing view



Labeled Turbines - Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T48) 1.4km

VIEWPOINT L15: DARLIMURLA ROAD

(GPS 55 H, 431126m E, 5752903m S)



Existing view



Wireframe - Labelled view (Concept Layout - V1.5)

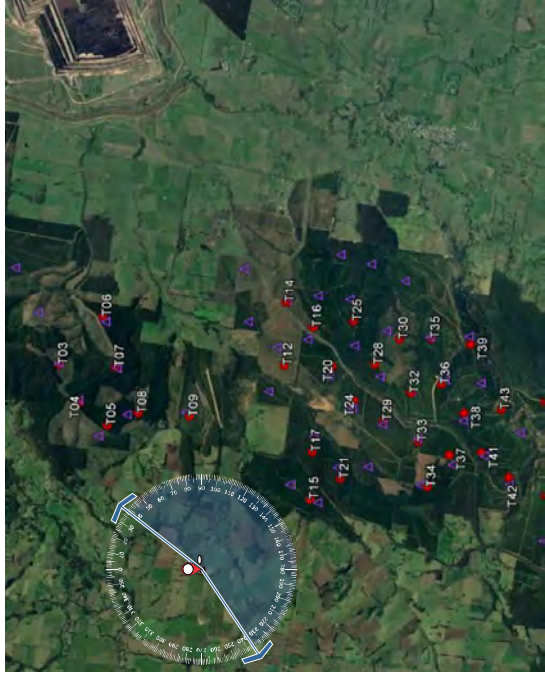
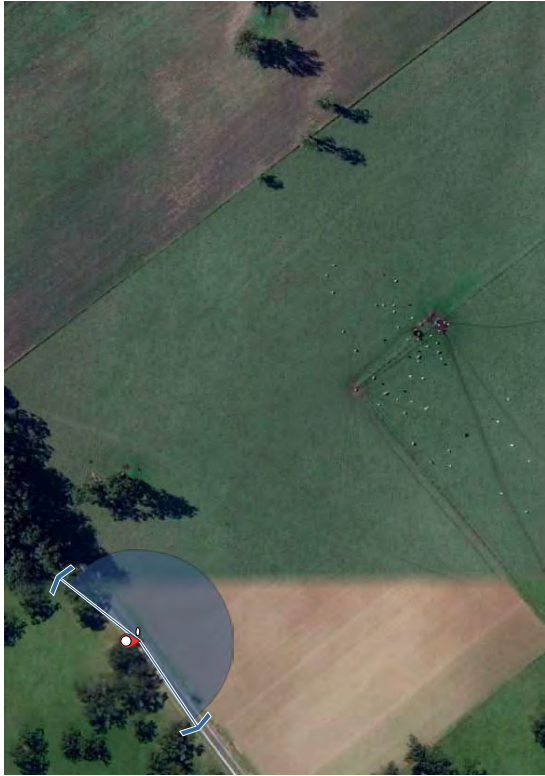




Existing view



Photomontage - Revised Layout (V2.1)

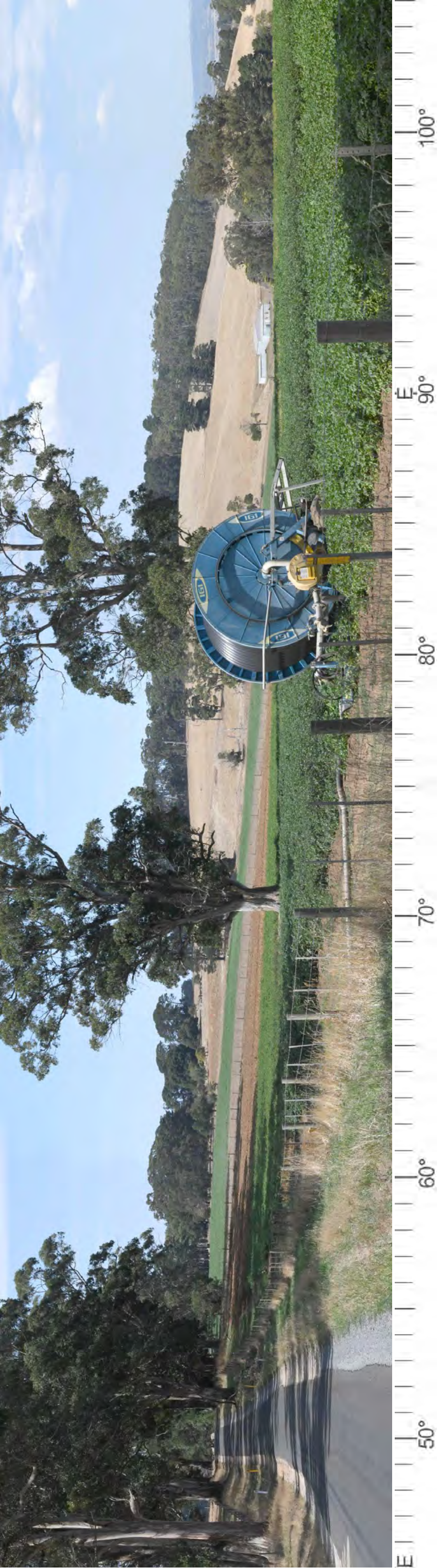


- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine
Revised Layout - (T15) 2.6km

VIEWPOINT L21: MCDONALDS TRACK

(GPS 55 H, 432370m E, 5762710m S)



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T15) 2.6km**

VIEWPOINT L21: MCDONALDS TRACK

(GPS 55 H, 432370m E, 5762710m S)



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T15) 2.6km**

VIEWPOINT L21: MCDONALDS TRACK

(GPS 55 H, 432370m E, 5762710m S)



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T15) 2.6km**

(GPS 55 H, 432370m E, 5762710m S)





Existing view

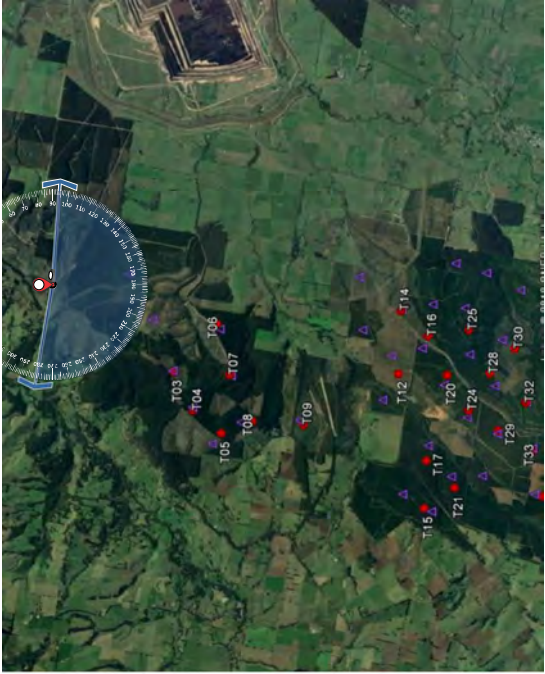


Photomontage - Revised Layout (V2.1)



- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

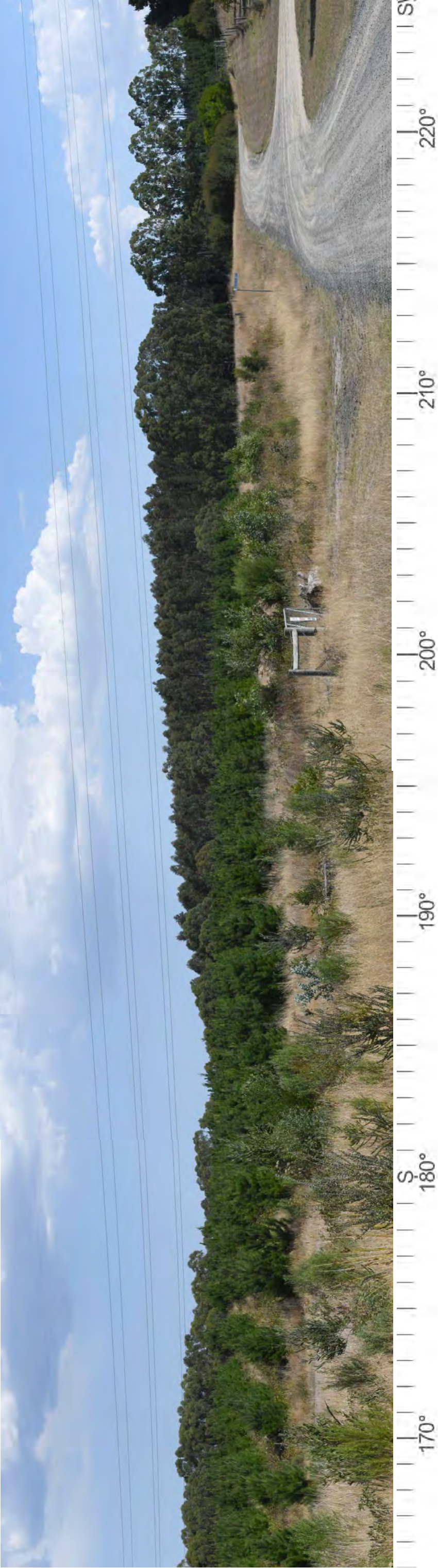
Distance to Nearest Turbine
Revised Layout - (T03) 3.0km



Viewpoint Map

VIEWPOINT L22: SAYERS TRACK




(GPS 55 H, 438274m E, 5768007m S)



Existing view



Photomontage- Revised Layout (V2.1)

-  Viewpoint location and orientation
-  Turbine location - Concept Layout
-  Turbine location - Revised Layout

**Distance to Nearest Turbine
Revised Layout - (T03) 3.0km**






Viewpoint Map



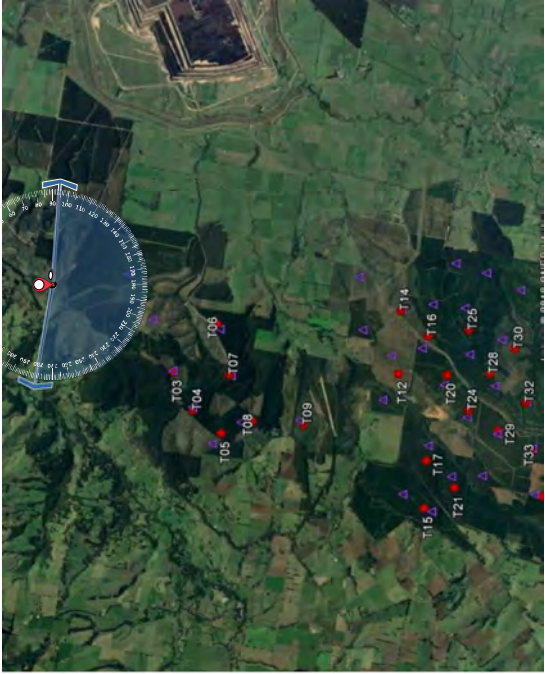
Existing view



Labeled Turbines - Revised Layout (V2.1)

-  Viewpoint location and orientation
-  Turbine location - Concept Layout
-  Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T03) 3.0km



Viewpoint Map



Existing view



Photomontage - Revised Layout (V2.1)

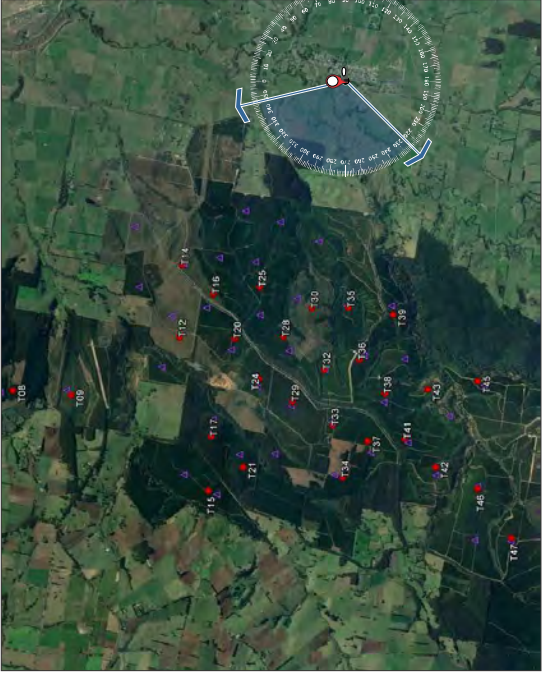
See Sheet 2



See Sheet 3

- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T25) 3.9km



Viewpoint Map



Existing view



Photomontage- Revised Layout (V2.1)



- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T25) 3.9km**



Viewpoint Map



Existing view



Photomontage- Revised Layout (V2.1)



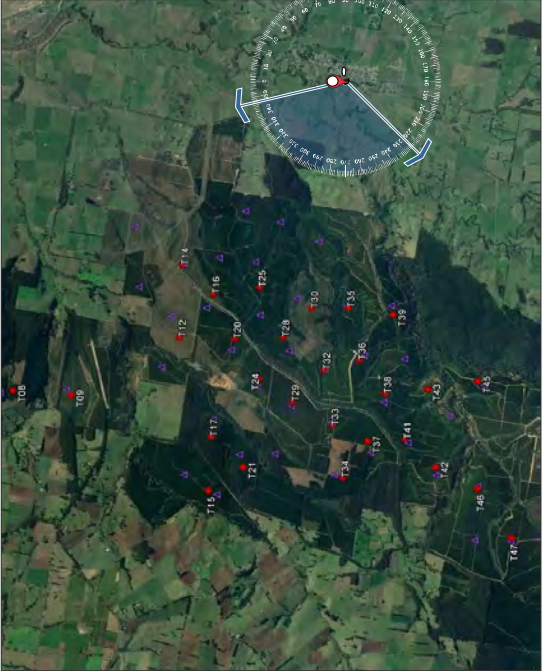
- Viewpoint location and orientation
 - Turbine location - Concept Layout
 - Turbine location - Revised Layout
- Distance to Nearest Turbine Revised Layout - (T25) 3.9km**



Existing view



Labeled Turbines - Revised Layout (V2.1)

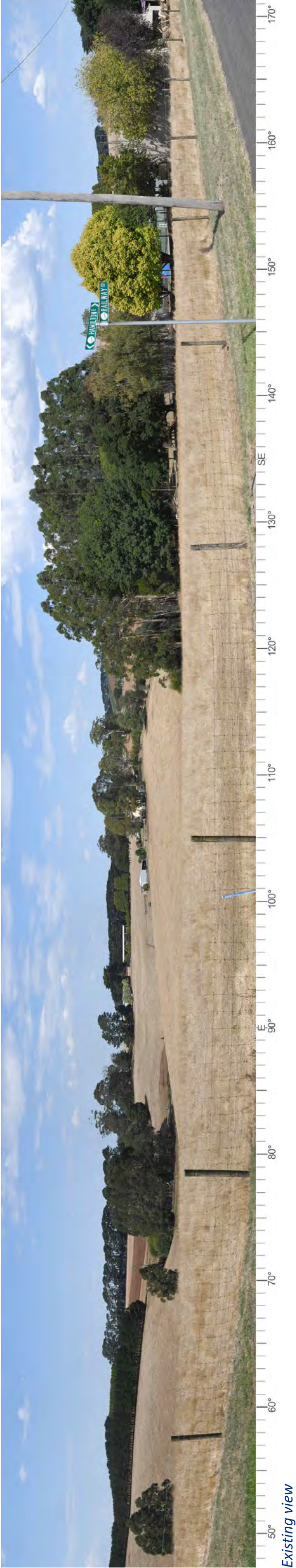


- Viewpoint location and orientation
- Turbine location - Concept Layout
- Turbine location - Revised Layout

Distance to Nearest Turbine Revised Layout - (T25) 3.9km

VIEWPOINT T9: THORPDALE TOWNSHIP

(GPS 55 H, 428175m E, 5762013m S)



Existing view



Wireframe - Labelled view (Concept Layout - V1.5)





Delburn Wind Farm

Landscape and Visual Impact Assessment Addendum report

3 | FINAL

4 February 2021

Delburn Wind Farm Pty Ltd (An OSMI Australia Company)



Delburn Wind Farm

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1. Introduction

Delburn Wind Farm Pty Ltd (an OSMI Australia Company) is seeking approval to develop a new wind energy facility in southeast Victoria.

The proposed Delburn Wind Farm (the Project) will include:

- Up to 33 wind turbines, with an overall height of 250 m;
- Internal access tracks;
- Wind monitoring masts;
- Operations and maintenance facilities; and
- Underground cabling and necessary infrastructure to connect the Project to the grid.

The Project, inclusive of the grid connecting infrastructure, is proposed within the existing HVP Plantations Thorpdale Tree Farm.

The original turbine layout proposed up to 53 wind turbines with an overall height of 250 m, internal access tracks, wind monitoring stations, underground cabling, and an on-site terminal station. This layout has been refined to remove 20 turbines in response to a range of initial concerns which include views and visual amenity.

Documentation supporting the Planning Application was submitted to DEWLP on 23 December 2020. The DELWP have requested a revised Visual Impact Assessment to assess the visual impacts of the proposed Wind Energy Facility to the following locations:

- The residential dwellings at Property ID's 853, 875, 1171 and 4155, and
- An additional location along the Grand Ridge Rail Trail east of the Old Darlimurla Road.

In response to the DELWP's request for further assessment from private dwellings, the proponent has attempted to gain access to the four additional residential dwellings for the purposed of undertaking an assessment of the Landscape and Visual Impacts of the Project. Details of the dates and methods of approach can be obtained via the client and the Community and Stakeholder Relations management data base.

At the time of preparing this report addendum, access to one residential dwelling was granted by the owner and tenant.

1.1 Purpose of this report

This report will assess the visual impact from the residential dwelling where access was granted. Permission to access the premises of the remainder of the dwellings was not able to be obtained. For these locations' imagery gathered from publicly accessible locations has been used to consider the potential for views and visual impact of the proposed turbines.

This report will also assess the visual impact from an additional location along the Grand Ridge Rail Trail east of the Old Darlimurla Road.

This addendum report should be read in conjunction with the e assessment, methodology and scale of effects set out in *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020*.

2. Residential Dwellings

Chapter 9 of the *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020* undertook an assessment of views and visual impact from a number of residential dwellings in proximity to the Project.

At the time of preparing the visual impact assessment from residential dwellings, it is understood that there were up to 1567 dwellings within 6.0km of a proposed turbine. The following table summarises the residential dwellings and their relative distance to the nearest turbine.

Table 2-1: Residential dwellings within 6.0km of a turbine

Distance to nearest turbine	Number of dwellings
1.0-2.0km	103
2.0-3.0km	214
3.0-4.0km	256
4.0-5.0km	694
5.0-6.0km	300*

It is understood these numbers to be conservative as some structures may comprise sheds, farm structures or abandoned dwellings. Actual numbers of dwellings were not able to be confirmed due in part to access restrictions limiting ground truthing.

A number of residential dwellings were visited during the early planning and assessment stages of the Project. Part of these visits were to assist with ongoing discussions regarding views, visibility, and potential visual impact from residential dwellings. Sixteen landowners or dwelling occupiers granted permission for their dwelling to be included in the assessment of views and visual impact from residential dwellings. These dwellings allowed for the assessment of a range of landscape settings, viewing distances and angles towards the Project.

Similar to access permissions sought in preparing the *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020*, access to only one of the four additional dwellings requested by DEWLP for further assessment has been granted. An assessment of views from this dwelling are provided in the following section. For the remaining three dwellings, views are an approximation only and should be considered as such.

2.1.1 Dwelling #853

Dwelling #853 is located within cleared farmland towards the northern portion of the proposed wind farm. The turbines include T07 approximately 1.45 km to the north, T08 approximately 1.75 km to the east, T26 approximately 1.1 km to the south and T24 approximately 1.5 km to the south-west. The dwelling is set low within a localised valley.

Access to the rear yard was not permitted at the time of the visit for the purposes of assessing views and visual impact from the dwelling. The internal layout or configuration of the dwelling was also not able to be confirmed.

Figure 2-1 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.



Figure 2-1: Dwelling #853 context map

Figure 2-2 shows the location of viewpoints captured in proximity to the dwelling for use in this assessment. Montages prepared using the TrueView® software utilised by OSMI for the Project were prepared from the Driveway. These have also been included.



Figure 2-2 Viewing locations

Figure 2-3 shows the view looking north towards the location of T07. This location is along the northern side of the dwelling in proximity to two internal windows. The function of the internal layout of the dwelling and nature of views was not provided.



Figure 2-3: Dwelling #853 – Existing view looking north

Turbine T07 would be to the left of the shed seen and in proximity to the power pole. In this view, the lower section of turbine T07 would be screened by the nearby vegetated rise, while the upper section of the tower, nacelle, and turbine visible. At a distance of approximately 1.45 km, the turbine would be of a visual scale that is similar to the existing power pole located central to this view.

Figure 2-4 shows the northern dwelling elevation and windows oriented generally towards turbine T07.

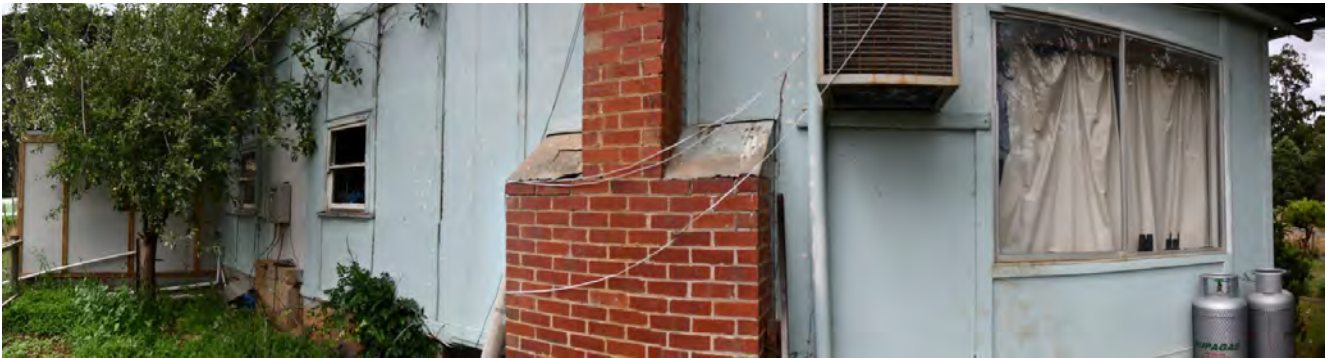


Figure 2-4 Northern Elevation

Views from the eastern (image left) and western (image right) windows appear to be partially screened or filtered by existing trees seen in both Figure 2-3 and Figure 2-4. Views in the direction of turbine 07 from the central window would be partially filtered by the tree seen in the left of the view.

Figure 2-5 shows the view looking east to south from the entrance drive and along the southern edge of the dwelling.



Figure 2-5: Dwelling #853 – Existing view looking east to south

Vegetation seen in the left of the image runs the length of the southern façade of the dwelling. Trees and shrubs within this planting screens views to the surrounding area and in the direction of the turbines. From this location, turbine T08 would be approximately 1.75 km to the east and along the drive. turbine T24 would be approximately 1.5 km to the south west, and Turbine T26 approximately 1.1 km to the south.

Figure 2-6 shows the view looking directly east towards turbine T08, approximately 1.75 km to the east. This view was captured by OSMI using the TrueView® imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 2-6: Dwelling #853 – TrueView® image looking west (Source: OSMI Australia)

Looking east along the drive, the upper portion of the turbine T08 would be visible over the stock yards and shedding seen in the background of the view. The upper portion (nacelle and above) of turbine T09 would be visible to the right of the trees and stock yards.

Figure 2-7 shows the view looking south towards turbine T026, approximately 1.1 km to the south. Turbine T26 is the closest proposed turbine to dwelling #853. This view was also captured by OSMI using the TrueView® imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 2-7: Dwelling #608 – TrueView® image looking south (Source: OSMI Australia)

Looking south, the upper portion of turbine T26 (nacelle and above) would be visible to the left of existing trees within the nearby paddocks, along Ten Mile Creek Road and the forestry areas beyond.

The imagery captured by OSMI through the TrueView® software assists to demonstrate the effect of topography and vegetation in screening views of turbines and the ability for landscape screening to be effective if required at this location. As stated in the main report, any proposed screening should be developed in concert with a bushfire management plan.

The overall visual impact would be **Low to potentially moderate**. The turbines to the east and south will be screened from the dwelling by existing shrubs and trees location along the southern edge of the drive.

There is the potential for views towards turbine T07 to the north from rooms located along the northern side of the dwelling. Views towards turbine T07 from within these rooms would be partially screened or filtered by existing vegetation. The moderated rating recognises that the internal nature of these rooms and views is not known. If required, views of the turbines have the potential to be screened through additional landscaping if required.

2.1.2 Dwelling #875

Dwelling #875 is located to the north and west of the project. Turbine T03 is approximately 1.2 km to the east, turbine T04 is approximately 1.0 km to the south east and turbine T05 is approximately 1.5 km to the south.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-8 shows the location of the dwelling in proximity to the nearest proposed turbines.



Figure 2-8: Dwelling #875 context map

The dwelling is approximately 300 m to the north of the main access road. Figure 2-9 shows the setting of the dwelling and ancillary structures located at property ID #875, all of which are set within forest and canopy vegetation.



Figure 2-9 Dwelling ID #875

The dwelling and ancillary structures are not visible from the road situated between the turbines and the dwelling.

Figure 2-10 shows the structure and integrity of vegetation in the areas of forest between the dwelling at property ID#875, the main access road and the proposed turbines. This view is taken approximately 50 m to the north of the roadway and along a publicly accessible forestry road. The location is approximately 600m to the south east of the dwelling closer to the proposed turbines and the edge of the canopy trees.



Figure 2-10: Forestry vegetation ~ 50 from road edge.

At 50 m inside the forestry edge, views towards the turbines are filtered by the trunks and canopy vegetation limited views towards the proposed turbines. Noting that the dwelling at property ID #875 is located approximately 300 m north of the road edge and set further into the canopy vegetation, it is unlikely that there would be views of the turbines.

For the above reasons and supported by the imagery included above, it is anticipated that the overall visual impact would be **NIL**. As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

2.1.3 Dwelling #1171

Dwelling #1171 is located approximately mid-way along the eastern boundary of the project. Turbine T13 is approximately 1.7 km to the north west, turbine T08 approximately 1.2 km to the east and turbine T19 approximately 1.2 km to the south-west.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-11 shows the location of the dwelling in proximity to the nearest proposed turbines.



Figure 2-11: Dwelling #1171 context map

The dwelling is approximately 130 m to south of the main access road and set lower on south to south east facing slope away from the proposed turbine locations. Figure 2-12 shows the setting of the dwelling and ancillary structures located at property ID #1171, all of which are set within canopy vegetation.



Figure 2-12 Dwelling ID #1171

The dwelling and ancillary structures are not visible from the road situated between the turbines and the dwelling.

Figure 2-13 shows the view along the driveway and access to the dwelling at property ID #1171.



Figure 2-13 Dwelling Access

Figure 2-14 shows the view looking west along the roadway in the direction of the proposed turbines. The dwelling is located to the left of the image and downslope. The proposed turbines would be in the background of this view.



Figure 2-14: View from roadway

From this location along the roadway there would be limited to no views of the proposed turbines. Noting that the dwelling at property ID #1171 is located further downslope and set within the vegetation shown in the above images, it is unlikely that there would be views of the turbines.

For the above reasons and supported by the imagery included above, it is anticipated that the overall visual impact would be **NIL**. As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

2.1.4 Dwelling #4155

Dwelling #4155 is located at the southern end of the project along the eastern side. Turbine T32 is approximately 1.6 km to the south-west, turbine T31 approximately 1.8 km to the west, turbine T30 approximately 1.3 km to the north-west and turbine T29 approximately 1.4 km to the north-east.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-15 shows the location of the dwelling in proximity to the nearest proposed turbines.

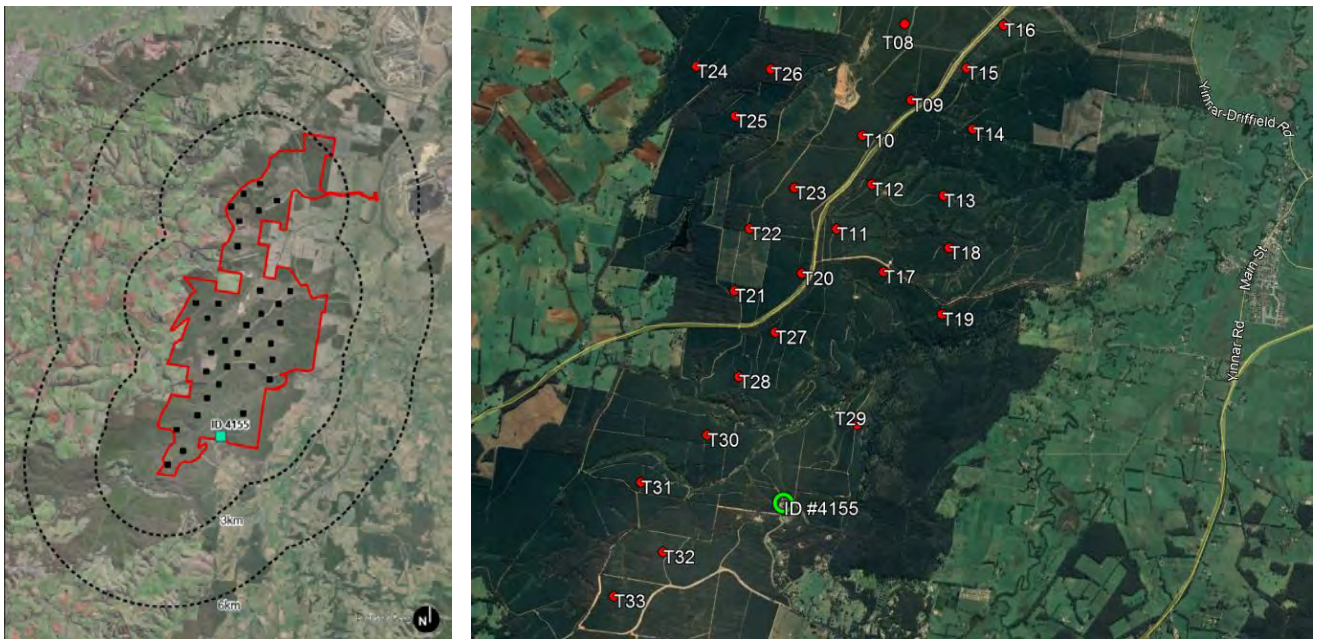


Figure 2-15: Dwelling #1171 context map

Figure 2-16 shows the setting of the dwelling and ancillary structures located at property ID #4155.



Figure 2-16 Dwelling ID #1171

The dwelling is set behind mature native trees generally to the north, east and south of the dwelling. The proposed turbines would be located within the timber plantation and forestry coups to the west, north and north west.

Figure 2-17 shows the view towards the dwelling from the roadway between the dwelling, plantation areas and the proposed turbines.



Figure 2-17 Dwelling Access

Figure 2-18 shows the view looking from south west to north east from the same location. Vegetation within the frontage of the allotment comprises predominantly tall, clear trunked eucalypts sufficiently spaced to allow views through the trunks and the underside of the tree canopy.



Figure 2-18: View from roadway looking south west to north east

From the viewing location along the roadway, the turbines would be screened by the plantation timbers on the opposing side of the road. It is recognised that these timbers are harvested, permitting views in the direction of the turbines. It is anticipated that trees would be re-established shortly after harvesting has ceased.

In the short-term, it is anticipated that the overall visual impact would be **NIL** due to the screening provided by the timbers within the forestry plantation. It is expected that this would change for a period of time following timber harvesting. Following which, the impact of views and amenity is difficult to discern without firstly understanding the layout of the dwelling and potential viewing locations.

As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

3. Grand Ridge Rail Trail – East of Old Darlimurla

It is a requirement of the Victorian Wind Farm Guidelines set out in 52.32 Wind Energy Facility to consider the potential for impacts on views and amenity from significant conservation and recreation areas, water features, tourist routes and walking tracks.

The LVIA *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020* assessed the visual impact of the proposed Delburn Wind Farm from 11 recreational trails, parks, and areas of open space within the project viewshed.

Three locations were selected at key locations along the Grand Ridge Rail Trail to consider the range of views and likely visual impact of the proposed wind farm. The locations included

- RT1a - Grand Ridge Rail Trail head in Boolarra (Page 159)
- RT1b - Former Darlimurla Station and now trail interpretative station (Page 161); and
- RT1c - Grand Ridge Rail Trail head in Mirboo North (Page 163)

DEWLP have requested the assessment of views from an additional location along the Grand Ridge Rail Trail to the east of Old Darlimurla Road. This viewpoint will be described and viewpoint RT 1d – Grand Ridge Rail Trail east of Old Darlimurla Road.

Figure 3-1 shows the selected viewpoint locations along the Grand Ridge Rail Trail in green and the additional viewpoint RT 1d Grand Ridge Rail Trail east of Old Darlimurla Road.



Figure 3-1 Grand Ridge Rail Trail Viewpoint Locations

The majority of views from the trail are filtered or screened by topography, vegetation, or a combination of both.

3.1.1 Viewpoint RT 1d – Grand Ridge Trail east of Old Darlimurla Road

Viewpoint RT1d is located along the Grand Ridge Rail trail approximately 1.6 km east of the RT1b at the former Darlimurla Station.

The nearest turbine (T33) is approximately 1.45 km to the north.

Figure 3-2 shows the view looking north towards turbine T33. The location was selected as there are clear views from the trail over a farm gate and paddocks. Views in the direction of the turbines from locations further to the east and west are filtered or screened by vegetation along the margins of the trail.



Figure 3-2: Viewpoint RT1d – existing view looking north

Turbine T33 would be located in the direction of the large shed roughly central to this view and beyond the ridgeline.

Figure 3-3 shows the view looking east along the Grand Ridge Rail Trail heading towards Boolarra.



Figure 3-3 View looking east along rail trail

The proposed turbines would be to the north of this view (image left). The cleared area to the right of the image is the firebreak located around the perimeter of the timber plantation.

Figure 3-4 shows the view looking west along the rail trail heading towards Mirboo North.



Figure 3-4 View looking west along rail trail

The proposed turbines would be to the north of this view (image right). In this direction, dense vegetation is situated close to both edges of the trail.

Figure 3-5 shows a similar view where the turbines have been superimposed using TrueView[®].



Figure 3-5 View looking north (Source – Imagery supplied by OSMI Trueview®)

The vegetated rise seen beyond the shed is closer to the trail and higher in elevation than the base of the turbine which would screen the base and part of the turbine tower. Part of the upper section of turbine T33 would be visible above the vegetated horizon.

Turbine T33 would be visible from this location along the Grand Ridge Rail Trail where breaks or gaps in vegetation such as this location permits views. Turbine visibility would form part of the dynamic views afforded along the trail. Although the rail trail is a sensitive use, and views include both forested hills and farmland, views of the turbines would be fleeting and limited to select locations.

Due to the limited visibility, the overall visual impact would be **Low**.

VIEWPOINT RT1b – GRAND RIDGE TRAIL DARLIMURLA		
Distance	1.45 km northeast (T33)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	Low	

4. Conclusion

This addendum report has reviewed the impacts from several additional locations requested by DEWLP.

For the additional residential locations requested, the ability to assess the impacts in detail has been encumbered by the inability to gain access to several of the requested dwellings.

These additional viewpoints do however further confirm the observations made for views and visual impact from residential locations in the main report being that the greatest potential for visual impacts would be from individual dwellings located in close proximity to the Project. This further assessment has shown that views from these areas are diverse and visual impact changes dramatically over a short distance. Views from some dwellings have the potential to have a high visual impact, whereas dwellings which are located at a similar or even shorter distance to the proposed turbines will have no visibility at all. This is due to the topography of the landscape in which the dwellings are located, the orientation and proximity to vegetation both within the private realm, roadsides, plantations, and forestry areas.

The additional viewpoint identified along the Grand Ridge Rail Trail also supports the observations and conclusions made in the main report that there will be views of the turbines from locations along the trail. The majority of views from the trail will be forward looking in the direction of trail with fleeting views through breaks in trail vegetation. In these instances, views of the turbines will be dependent upon topography, vegetation and viewing direction.

This Addendum Report has not changed the findings of the original LVIA report that showed the Project is in an area that can accommodate the visual change of the Proposed Delburn Wind Farm and will not be detrimental to the views, character and amenity of the area within the viewshed of the Project.